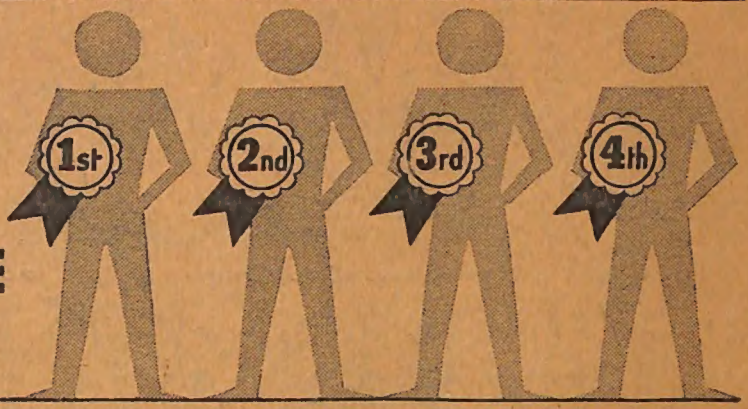
RAILROAD MAGAZINE
APR 1939



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APRIL, 1939 **Vol. XXV, No. 5** ***15 CENTS***

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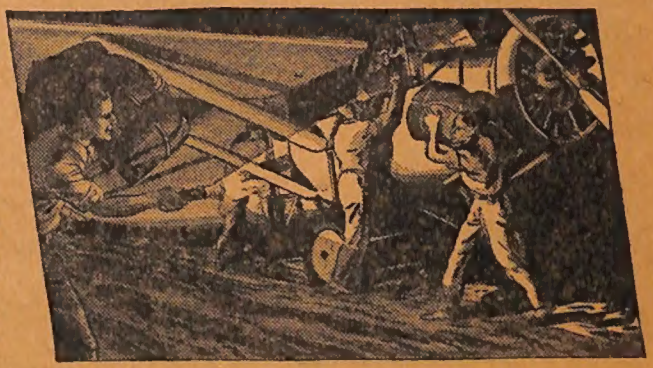
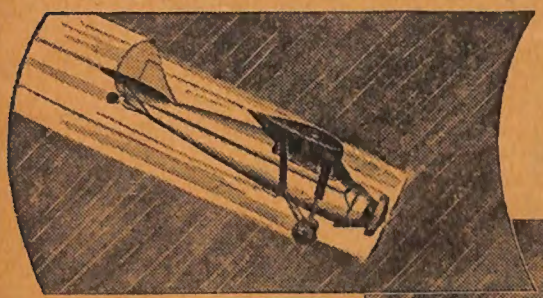
TROPIC DOWNPOUR BRINGS ADVENTURE TO ROUTINE FLIGHT

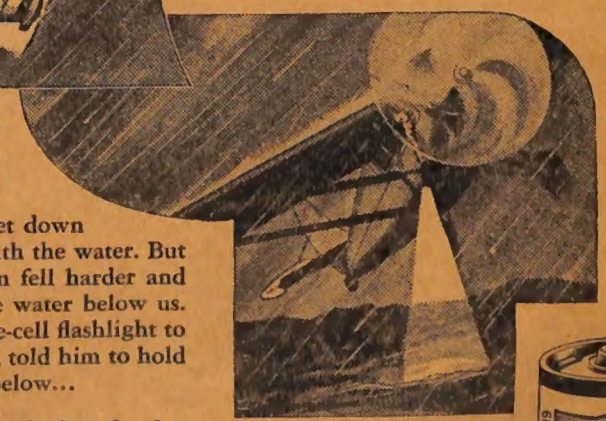
OLEN V. ANDREW



1 "I had flown four friends over to Lihue, on the island of Kauai, for a weekend of camping on the beach," writes Olen V. Andrew, P. O. Box 3295, Honolulu, T. H.



2 "We broke camp at three o'clock Monday morning, packed our dunnage in the plane and crawled in for the 100-mile hop back to Honolulu, all of it being over water. There was no moon, but the night was clear when we started. Five minutes later...



3 "...we ran into a driving rainstorm. I couldn't fly over it, I didn't have proper instruments for flying through it, so the only thing to do was to get down low and keep visual contact with the water. But it kept getting darker, the rain fell harder and harder, till we couldn't see the water below us. I handed my big 'Eveready' five-cell flashlight to the fellow in the co-pilot's seat, told him to hold it out the window and flash it below...

4 "...and there was the sea, only four feet below us! Those long Pacific rollers were almost lapping at the wheels! My heart skipped a beat to think how I had brought five people within inches of their doom! Certainly it was the power of those 'Eveready' *fresh* DATED batteries that saved us all, and that kept us safe above the sea for the next half hour till the storm lifted. You can take it from me, I don't fly without 'em.

(Signed) Olen V. Andrew"

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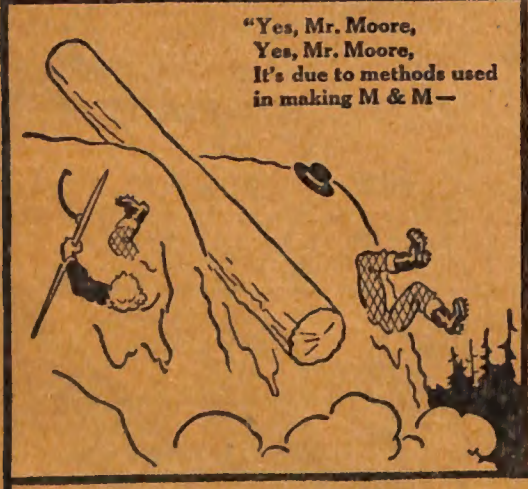

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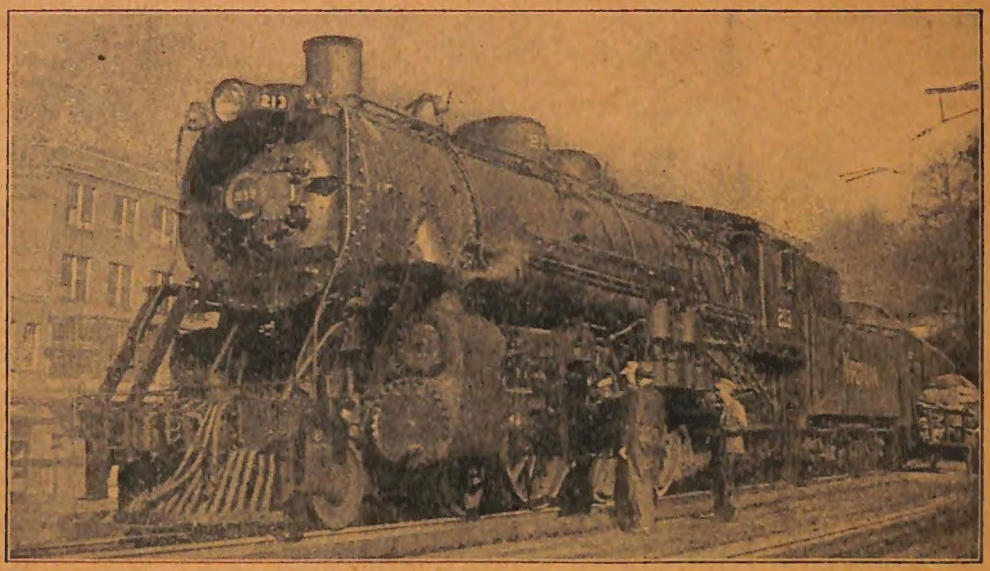


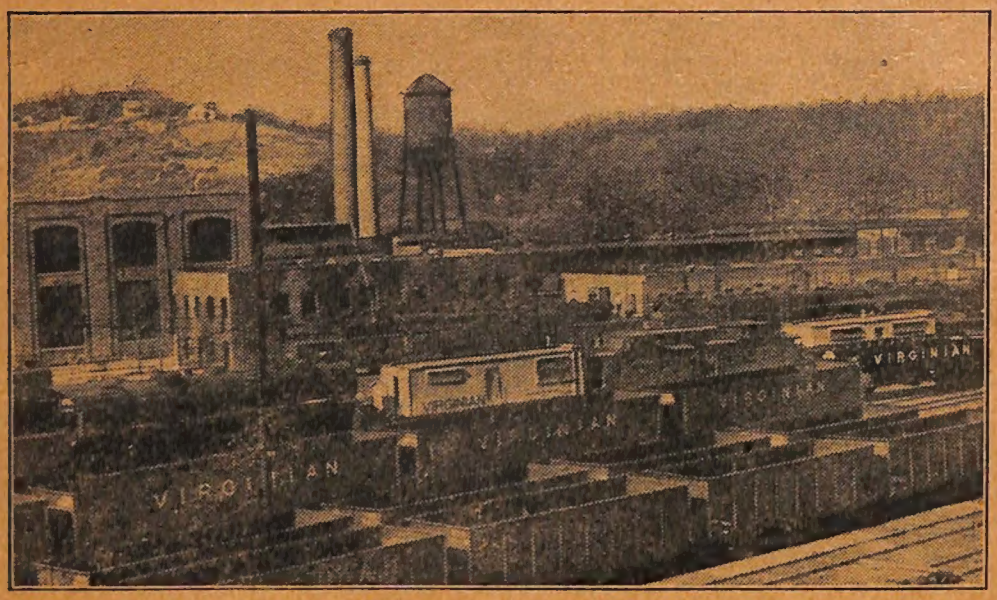
Number Four, the Eastbound Daily Passenger Train, at Mullens, W. Va.

Transportation Factory

The Virginian Railway Was the Most Expensive to Build, Costs the Least to Operate, Runs the Heaviest Trains, and Earns the Biggest Profits

THE comparison has been made before, but it is too vivid, too sound to kick aside because it is not altogether new: a railroad is a transportation factory. Its raw materials are coal or oil or electricity, and man-power; its machinery is locomotives and cars and stations and tracks and shops; its product is the movement of loads. Before it can produce anything at all, a lot of money must be spent on it; and if constructed for the cheapest possible operation, enormous amounts usually must be plowed into it. Like every factory, it can be worked most efficiently at somewhere near capacity; unlike most factories, however, it cannot be closed down for any length of time. Its only excuse for being is not that it creates work, but that it does precisely the opposite: it enables fewer men to do more, to manufacture more transportation.

A railroad behaves exactly as a factory does. Without enough orders, an abnormally large part of the money it takes in must go to defray the cost of erecting it; sometimes its revenues are so disappointing that the people who lent the money to build it are bluntly informed they made a mistake and will never get it back. In a few other instances, it spends a bit too much on a sumptuous or oversized plant, and despite good business can't



The Main Shops of the Virginian Are Located at Princeton, West Virginia

make ends meet and takes out its troubles on its founders. In rare instances, it closes down for good. Quite often, even in these cheerless days, it renders a fine account of itself. But no company, probably, demonstrates the essential characteristic of a railroad so brilliantly and so simply as the $168,000,000 Virginian. The Virginian is one of the most marvelous transporation factories on the globe.

The title of the road is geographically correct; it runs straight, or at any rate straighter than its two competitors the Norfolk & Western and the Chesapeake & Ohio, across the State of Virginia. As an indication of the sources of its great strength and distinguished rank, however, the name Virginian is almost irrelevant. The appropriate and just name would be the West Virginian Railway. If it weren't for what it hauls out of West Virginia, the line could not exist. And if it weren't that ninety-five per cent of what it takes out of West Virginia is soft coal and that most of this coal is concentrated in a rather tiny area (known as the Pocahontas district), the Virginian would be just another railway trying to get along. The Virginian even can thank the State of West Virginia for its comparative immunity to the economic depression: the demand for West Virginia coal has held up very well, on account of both its quality and price. And its price is comparatively low because it can be mined cheaply, not only because Nature has left it highly accessible but perhaps because the miners are not rewarded quite so lavishly for their efforts as elsewhere. And even if they are, the size and availability of the veins would make it possible to dig out West Virginia soft coal more cheaply than any other. The State of West Virginia, indeed, has guaranteed the future of this railroad. At the present rate, its coal will not be exhausted for more than 5000 years; and it could supply all the United States for 250 years.

The Affluent "Pocahontas" Roads Are the Chesapeake & Ohio, the Norfolk & Western, and the Virginian (Heavy Line), and All Make Money Hauling Coal Out of West Virginia. Though No Shorter to the Seaboard Than the Chesapeake & Ohio, and Only Nine Miles Less Than the Norfolk & Western, the Virginian Enjoys Easier Grades. Save for the Three Hills Between Mullens and Roanoke (See Page 17), Maximum Eastbound Grade Is Only Two-Tenths of One Per Cent

The Virginian Railway hauls coal out of the state, across Virginia, and down to the ocean. It resembles in shape a tree like the coco palm, which has an inordinately long trunk and a small but dense crown of leafy branches. The branches, which tap the rich coal mines of Wyoming, Raleigh and Fayette counties, all converge to the main within a distance of sixty miles; and the long trunk, bare of a single offshoot for 375 miles, swings across Virginia to the Atlantic tidewater at Norfolk and Sewall's Point. At present, the Virginian is taking about 30,000 tons of coal a day out of West Virginia. Though the greater part of it goes all the way down to Sewall's Point, perhaps ten per cent of it rolls north and west over connecting lines, and a smaller percentage is handed over to the railroads which it crosses on the way to the sea.

THE Virginian was not built primarily to harass its competitors, though they were well established in its territory and doubtless could have been extended to tap the areas which it now serves. It was planned and constructed to provide an honest low-grade outlet to tidewater. What was more, it was planned and built right from the start to handle a volume of traffic which at the time appeared to all right-thinking observers as grotesquely in excess of what it reasonably could look forward to. But the opinions even of experts did not retard it. For it was a dream railroad, made to order for one man who firmly believed he knew what he was doing. More than any other railroad in American history—and that includes the Great Northern—the Virginian was the lengthened shadow of one man. He was that great captain of industry, Henry Huddleston Rogers; but his railroad, despite the universal respect he commanded among business men, became known as Rogers' Folly.

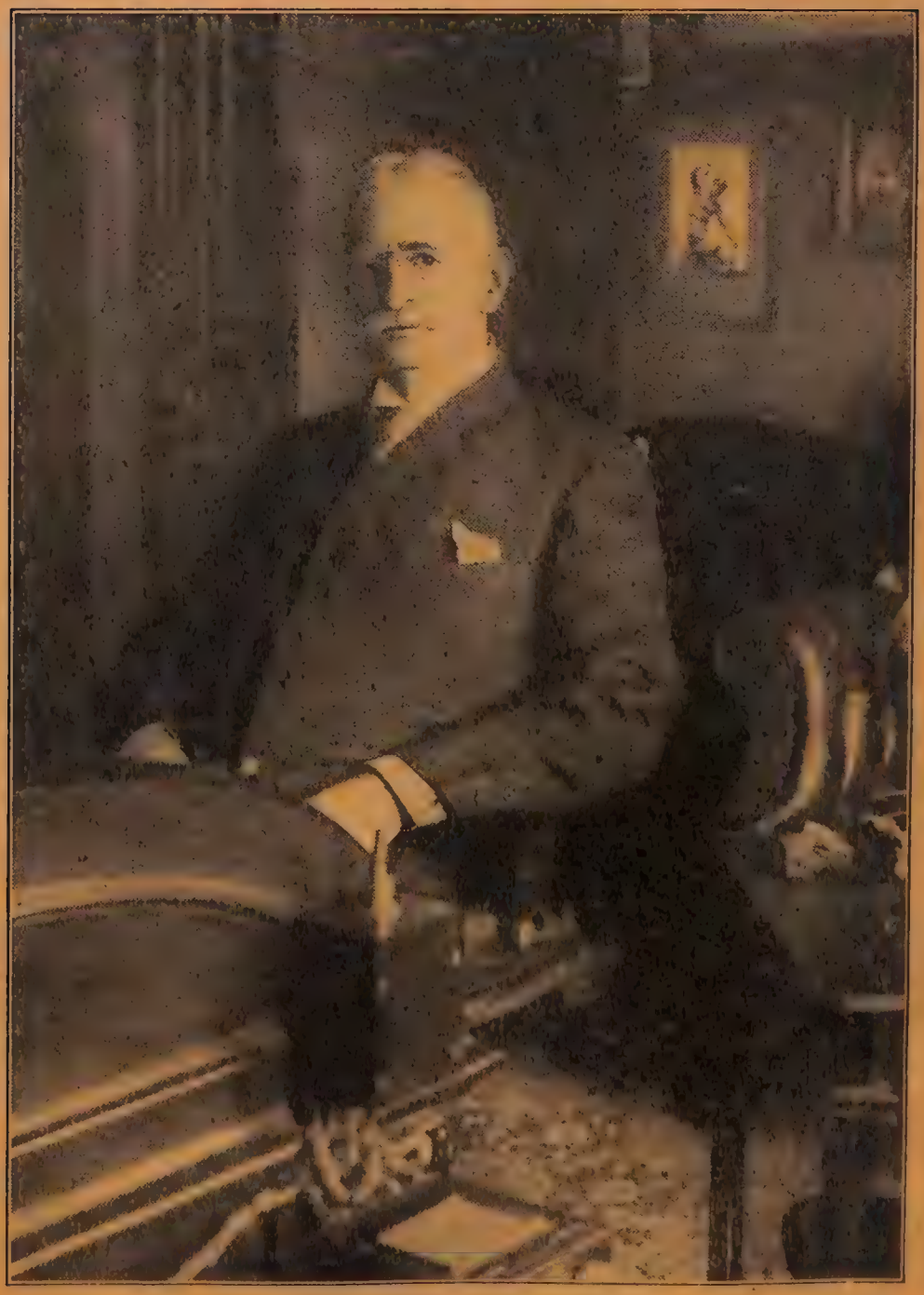
Not that Henry Huddleston Rogers erected the Virginian because he wanted to own a fine railroad. Or, as a few cynics hinted, because he yearned to carry to his grave the distinction of having performed one fine and noble business act in his life The

plain truth was that Rogers owned or had a financial interest in a number of undeveloped coal fields in West Virginia. He got his experts to estimate the probable output and the cost of a railroad, and decided it would be immensely worth while to lay his own iron trail to the ocean. He was so sure of himself that he sacrificed (temporarily) the bulk of his great fortune to his scheme. He sold millions of dollars worth of his securities, often at depressed prices, when he discovered that the Virginian was going to cost not the estimated twenty millions but closer to fifty millions. And before he was done he was so strapped he had to borrow ten millions from his banker friends, who subordinated their friendship to their doubt of and contempt for the project and demanded seven per cent interest for the money. In Wall Street it was known as the Loan de Luxe.

This was in 1907, when Rogers was 67 years old. Like Commodore Vanderbilt, Henry Rogers entered the railroad game as a fairly old man who had made his pile following other pursuits. Like Vanderbilt, he was both denounced and adored. He had been a poor but honest New England boy, had migrated to the Pennsylvania oil fields in his early twenties, and "by working hard as anybody I ever read about" had managed to rise high enough to become a partner of John D. Rockefeller, with whom he organized the Standard Oil Company. He had converted the three dollars with which he had started life into something like a hundred million. And by the time he was fifty Rogers was accepted generally as a great if not an entirely good American.

Nobody, though, ever denied the force of his personality. More than six feet tall, of commanding mien, with dark hair and penetrating, restless eyes, he was almost pathologically energetic, and indulged in an extraordinary capacity for sudden changes of mood and attitude, "transforming himself while he blinked his eyes." He expressed himself rapidly and precisely, giving the impression of a powerful mind working at top speed; yet his judgments were generally sound as if he had pondered them laboriously for a week. He never lacked admirers, not only because he was surpassingly generous, but because he was regarded as personally admirable. Mark Twain, who had met a few good men in his life, pronounced Rogers as the best man he'd ever known. If the fine edge of this opinion is dulled by the fact of Rogers' financial aid to the great author when his publishing ventures threatened to ruin him, his panegyric nevertheless seems to have been inspired by more than a lively sense of gratitude.

ALONG about 1900, Rogers' coal properties apparently began to burn a hole in his pocket. It was then, presumably, that he developed his affection for the idea of building the railroad. He organized a company called the Tidewater Railway in 1904, and began work almost immediately. The whole thing was started so quietly (it wasn't necessary to ask the ICC's permission in those days) that the Chesapeake & Ohio and the Norfolk & Western didn't realize what was going on until things were under way. Not then were very many aware that Rogers was the man behind it. Even W. N. Page, the construction engineer (for whom the town of Page, W. Va., was named), professed to be ignorant of the source of his funds; he only knew



HENRY HUDDLESTON ROGERS

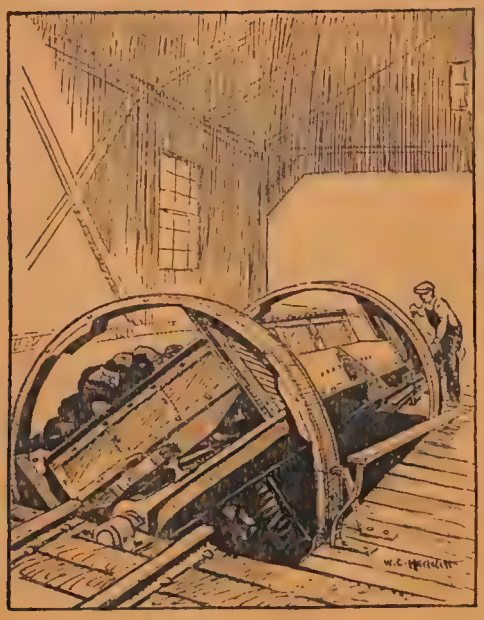
"The Whitest Man I Have Ever Known," Mark Twain Said

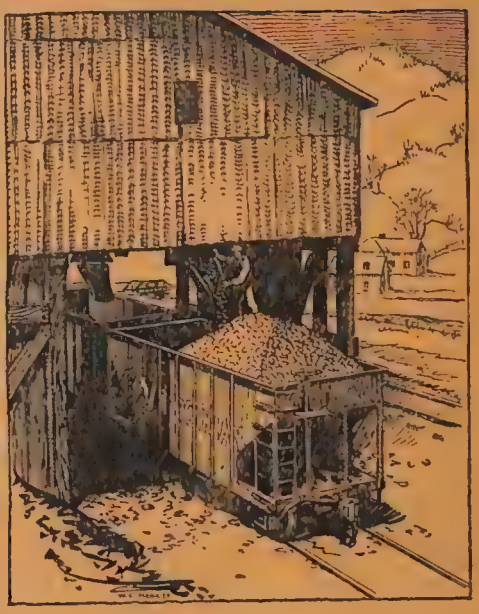
It Costs a Little Over $2 to Mine a Ton of Coal. The Four Drawings on These Two Pages Show the Operation of a Small Mine: (1) The Coal at the Mine Face, (2) Pushing It Out in a Car, (3) Emptying It on a Rotary Dumper, (4) Loading It Into a Hopper Car Underneath the Tipple

that his drafts on letters of credit were being honored for as high as twenty millions. Page iterated his ignorance before the ICC in 1907, when the Governmental body decided to examine the venture. And whatever the ICC thought of its economic necessity, it had to admire the railroad itself. It was being laid out so that eastward bound trains, once they had surmounted a short but steep hill, would have to negotiate grades of no more than six-tenths of one per cent. To effect this near-miracle in a mountainous country, a long succession of tunnels and bridges and embankments was necessary. The Virginian was a magnificent if expensive—not to say extravagant—piece of railroad.

It was the panic of 1907 which dumped Rogers in financial hot water, obliging him to sacrifice many of his valuable holdings in Anaconda Copper and the St. Paul Road to the greater glory of the Virginian; and this stress, plus the ignominy and worry of the Loan de Luxe, probably was the most severe ordeal of his whole career. And at his age, it was not healthy. He barely lived long enough to see the official opening of the Virginian, dying two months after the inaugural ceremonies. But that occasion, at Norfolk in April, 1909, probably afforded him one of the profoundest satisfactions of his life. Rogers showed his friends and associates an enormous Mallet locomotive hauling ten thousand tons of coal, and proudly informed them that the Virginian was going to handle the heaviest trains ever known.

This was indeed his mark on the face of the earth. Here at any rate was a rich fulfillment of his pious declaration: "Success is rooted in reciprocity. He who does not benefit the world is headed for bankruptcy on the high speed clutch." One of the exhibits at





the celebration was Mark Twain himself, who had paid such lavish respects to the builder as these: "His character is full of fine graces, but the finest is that he can load you down with crushing obligations and then so conduct himself that you never feel their weight. . . . Such a man is entitled to the high gift of humor; he has it at its very best." . . . At Norfolk he testified, after some allusions to Rogers' hair, which had grown white as his own: "He is the whitest man I have ever known."

All of which was both sincere and interesting. But realistic observers could not help pointing out the parallel between the Virginian and Flagler's Folly, the overseas extension from Florida to Key West, which at that very time was being completed by the 77-year-old Henry Flagler, builder of the Florida East Coast Railroad, also a founder of Standard Oil, and to boot a friend of Rogers. The parallel, indeed, was all too evident: Flagler's grandiose railroad bridge across the ocean, and Rogers' extravagant, overbuilt Virginian; both of them the final, grotesque deeds of a lifetime of big and reckless accomplishments. But while Flagler's great, childlike gesture never has repudiated its nickname (the fact that the Government has converted it into a highway does not make it any less a folly, since there is no reason to suppose that hurricanes will show more respect for the Government than for private owners), the work of Henry Huddleston Rogers has survived as one of the most genuinely useful and incredibly profitable enterprises into the building of which money ever has been poured.

THEN let us take a look at the Virginian. Since 95 per cent of its tonnage is coal, and it generally is under no compulsion to roll the coal trains at high speed or on fixed schedules, each train, almost without exception, can be loaded to the absolute capacity of the motive power at whatever speed is cheapest or most efficient. This

is by all odds the most interesting and important thing to remember about the Virginian's operating technique: it is why it handles the world's heaviest trains.

The average pay load carried by the average U. S. freight train over the average mile is about 720 tons; on the Virginian it is 2234. And this figure, for all its relative immensity, fails to render a fair account of the Virginian's prodigious work. Most of the coal obviously moves in one direction; therefore empty cars, carrying no pay load whatsoever, must be hauled back. The tri-weekly peddler freight and daily express freight with general merchandise are on more or less of a fixed schedule, have to be dispatched regardless of tonnage available. So it is plain that the main line coal drags, in order to bring the average up so high, are necessarily of gigantic proportions.

The next important thing to remember is that these heavy trains, with but two or three exceptions, roll downhill to tidewater. The exceptions, however, are formidable; and what the average man often overlooks is the fact that it is almost as expensive to bring a train down a grade as up. Going up, energy must be expended; going down, it must be dissipated, and the latter is possibly a greater problem than the former.

The best way to examine the nature of the Virginian's colossal operations is to begin at a smoky little town called Elmore (375 miles from Norfolk), situated deep in a hollow where Barkers Creek, black and muddy with coal dust, flows into the swift-running Guyandot River. Elmore represents the end of the bare trunk of the figurative tree which is the Virginian. Here is the first of the coal branches, the recently-constructed line to Simon and Gilbert on the Guyandot River, smack in the coal district which is the stamping ground of the Norfolk & Western and Chesapeake & Ohio, whose branches connect with the Virginian at Gilbert. And from Simon there is an offshoot to Oceana, which has just been connected with Morri by a new low-grade line along Laurel Creek. Two miles north on the main, just below the shed-

World's Heaviest and Most Powerful Locomotives Are the Virginia's Triple-Unit Electrics. They Are Kept in Repair at the Shops in Mullens, Where This Drawing Was Made

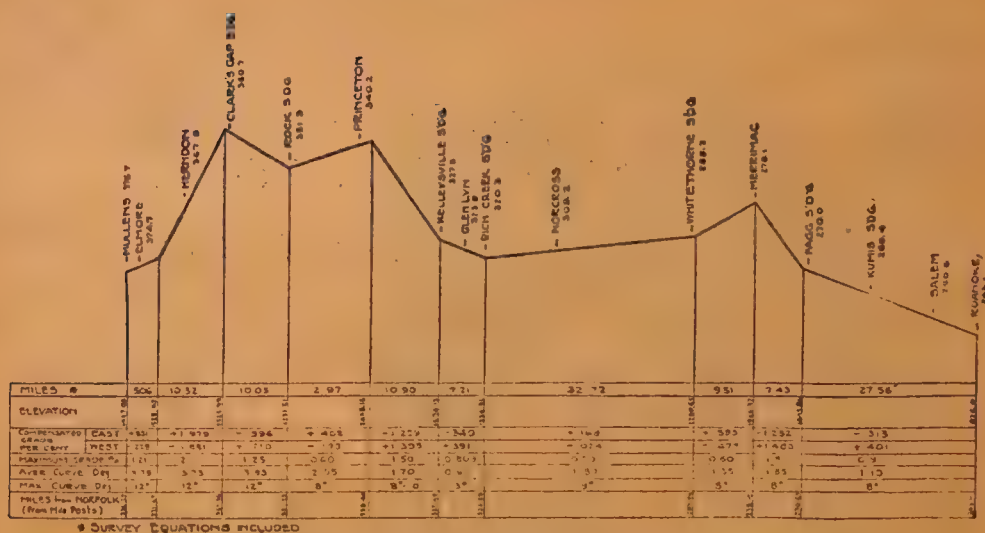
The Virginian Owns 9,952 Freight Cars (Mostly All Gondolas and Hopper Cars), of Which 2,016 Are Exactly Like This. Much Bigger and Longer Than Ordinary Gondolas, They Are Equipped with Six-Wheel Trucks, Weigh 41 Tons Light, Hold 117 Tons of Coal

like station at Mullens (a substantial small city of 2500, with pronounced metropolitan airs), begins the Winding Gulf branch, so called because it follows the Winding Gulf River for many miles up into the New River coal fields, finding its way later to the mines at Princewick and Pemberton and Fireco and Beckley. Here again it competes with the Chesapeake & Ohio, which advances up Piney Creek from its main line along New River to tap the same country. Note this overlap well; if it renders the Virginian vulnerable in such a rich territory, it renders the Chesapeake & Ohio equally vulnerable. The Virginian's interesting position in today's business world, which will receive our attention later, springs directly from this situation.

These two big limbs, both of them blessed with branches of their own, are the largest. With their tributaries they add up to 93 miles of first track. The others are shorter: three miles north of Mullens is the 17½-mile branch to Morri and Glen Rogers. Farther north are the Glen White, Lochgelly, Whipple, and Beards Fork spurs, which total about 13 miles of first track. Practically all of them, both long and short, slope downward to the main line, so any locomotive which can drag a train of empties up to the mines can escort them down full again. All it takes on those runs, the Virginian motive power men like to point out whimsically, is enough steam to keep up the air pressure. And, having reached the main line, they usually keep on going downhill until they arrive at Elmore. Save for a few thousand tons a day that are shipped up to Deepwater for the New York Central, all of the coal finds its way to Elmore before it begins its long journey down to the sea.

BUT Elmore, as we have said, is at the bottom of the railroad. The grade rises from it in both directions; and it rises to the south, in which direction the coal must go, with forbidding precipitation. So Elmore is the headquarters for the unceasing battle against the mountain, a battle in which the Virginian uses the most potent ammunition ever developed. Here the grade is figured to three decimal places (a reduction of one degree in the last digit of the figure would mean the saving of hundreds of dollars); and for ten miles, from a point between two miniscule mining towns called Bud

Looking Down the Big Hill South of Herndon, from the Rear End of Passenger Train Number Four, Which Is Hauled Over the Electrified Division by a Steam Engine



Condensed Profile of the Electrified Division, Mullens to Roanoke, 134 Miles. Coal Trains Are Run at 14 Miles on Hour from Mullens to Clarks Gap, Princeton to Kellysville, and Merrimac to Fagg; and at 28 miles an Hour Over the Rest of the Division

and Alpoca, the average grade, compensated for curves, is 1.979, and the maximum rise is 2.11. Thirteen miles south of Elmore it comes to an abrupt peak, at Clark's Gap. There the worst is over.

The Virginian assaults this grade with single trains of six thousand tons, no more and no less. Now, six thousand tons is not a light train on level ground. It represents 100 loaded boxcars (a string nearly a mile long), 85 loaded coal cars of 50 tons capacity, and needs a large engine to move at even moderate speed. Only a few railroads in North America make a practice of regularly dispatching trains of such size. What makes this instance so exceptional is that it takes around seven times the power to negotiate a two per cent grade that it does to run on level. The Virginian conquers the mountain with two enormous triple-unit electric locomotives, one at the head end and one with its shoulder to the caboose; and they push and pull and heave six thousand tons of coal and iron upwards at a steady, clock-like gait of fourteen miles an hour. These locomotives are the world's largest and most powerful; they weigh 638 tons apiece and can exert a starting pull of 277,500 pounds. The Virginian owns eleven of them, all constructed in 1925 and 1926, when the electrification was completed (a twelfth has been split up and each of the three units used separately). Save for the passenger train, which runs once a day in each direction, they perform all the main line work between Elmore and Roanoke, a distance of 132 miles.

When the 6000-ton train arrives at the top of the hill, the rear engine drops off and fills the train up to 10,000 tons, there being several mines along the line whose cars are picked up by a yard engine and taken to the summit. The single electric engine then pulls the train the rest of the way to Roanoke (eastern limit of electrification), running at 14 miles an hour up and down the steeper grades and at 28 miles an hour on the more level

The Op at Princeton Passes up an Order as Engine No. 101 Rolls Through with 10,000 Tons Behind Her

stretches. Good time for the trip is eight and a half hours, including stops for meets and the pickup at the summit. The cars are weighed at Roanoke, and a few set out for connecting railroads. When it is ready to leave Roanoke, however, it has swollen to 14,300 tons, which a standard U.S.R.A. Mallet steam locomotive handles down to Sewall's Point, ten miles beyond Norfolk, where the Virginian owns two great loading piers that can fill up a ship in an hour. Sometimes it is reduced en route, at the connections with the roads which run north and south, this being done not to relieve the engine, but for transfer purposes. Maximum eastbound grade between Roanoke and the Atlantic Ocean is two-tenths of one per cent, so a 14,300-ton load is no strain on the Mallets. Shortly after the monster 2-10-10-2 type engines were constructed in 1918, one of them wheeled a train of almost 17,000 tons down this line. They are now employed mostly north of Mullens, in the mine district; only a couple are stationed in Roanoke.

SUCH, briefly, is the manner in which the Virginian treats most of its tonnage and makes most of its money. And it is making a tremendous lot of money. Its operating ratio (the amount of operating revenues spent for operations) is about the world's lowest: 44.8 per cent.* (In 1937 U. S. Steel's Duluth, Missabe & Iron Range got by with 39 per cent, but its average over several years is much higher.) Hence the other 55.2 per cent of its twenty million gross is left for taxes, interest and dividends. Taxes and interest now are about equal, and together demand nearly 25 per cent. Which, with other income and equipment credits included in total revenues, leaves a third of them for dividends and surplus. Even with comparatively high interest charges, the Virginian has an astonishing amount left. But interest charges are high because the road cost a lot to build; and it can be operated so cheaply now because it cost a lot to build. So nobody in his right mind can cite the Virginian as an example of overcapitalization; obviously it is a perfect example of judiciously large capitalization.

Instead of being volubly proud of

These figures are for 1937; 1938's results were not ready when this went to press. They appear to be not quite so good.

"Drifting" Coal Cars Under a Tipple on the Main Line

this phenomenal record, however, the Virginian prefers to tuck its head under its wing whenever anybody wants to write about it. And with good reason. The freight rate increase late in 1937 also applied to coal, and brought all railroads about a dime more for every ton hauled; but while the Interstate Commerce Commission cheerfully extended it to most lines, it hated to include the three Pocahontas roads (Virginian, C&O, N&W), who it felt were prosperous enough already. Obviously it could not exclude them, for then Pocahontas coal would undersell the market and force the reduction of rates elsewhere anyway. So it permitted the increase for a year, urging

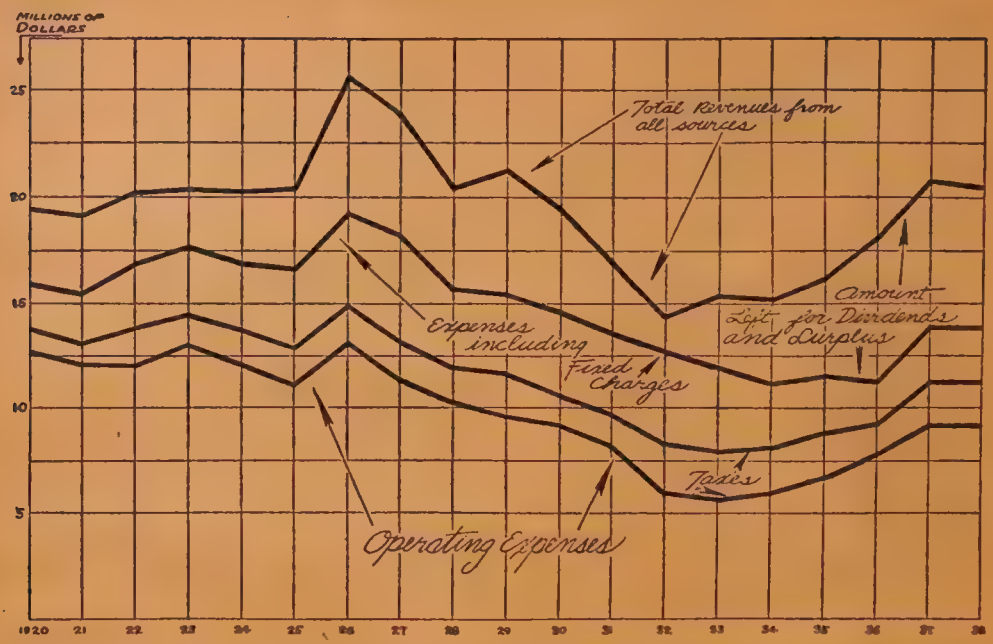
if not commanding the Pocahontas lines to get together and pool or divvy up the additional revenue (more than a million a year for the Virginian) with coal-hauling roads who needed it worse. This "communistic" resort they failed or perhaps didn't try hard to accomplish; and last fall the matter was argued at length before the ICC, which finally capitulated and permitted the increase to be extended indefinitely. It may be assumed, however, that the matter is not closed for all time.

But even in 1937, before the rate increase, the Virginian salted away a couple million of its seven million net into surplus, handing out a little more than four millions to the stockholders: six per cent on the preferred and eight on the common. And when any railroad can deliver more than a fifth of its gross to stockholders in these parlous times, it cannot very well expect its miraculous deed to go unnoticed.

In the Dispatcher's Office at Princeton

Certainly the Virginian has not been able to do this because its rates are preposterously high. As a matter of fact, its average freight revenue is .63 cents per ton-mile, just about the lowest in the world. Only that of the Chesapeake & Ohio, which in 1937 actually dipped slightly under the six-mill line, is lower. The difference does not seem significant. This means that it costs about $2.50 to ship a ton of coal over the 400-odd miles from the mines to Sewall's Point. Considered only in relation to the price of coal at the mine ($2.25), this is not extremely cheap. But coal at the mine is useless as so much sand to anybody who is not located there; and only the output of a well-run transportation factory makes it worth anything to the rest of the country. The appalling inefficiency of highway transportation is nowhere more evident than here. The owner of a truck, for instance, could not haul ten tons of coal 420 miles for less than $5 a ton unless he is willing to forego anything resembling a net profit or even decent pay for the driver. And keep in mind that the six-mill average revenue does not represent the *cost*, but the revenue. Counting operating expenses, fixed charges, and taxes, the actual cost of the Virginian's labors adds up to a trifle over four and a half mills a ton mile, undoubtedly the lowest figure in the world.

Naturally, the coal companies were not completely delighted with the status quo. In effect, their argument went like this: we want to make our good coal cheaper for the worthy people of New England and the rest of



The Financial History of the Virginian Since 1920. Though Rate Per Ton-Mile Has Averaged .63 Cents, and Prices of Materials and Labor Have Gone up, Operating Expenses Diminished from 71 Per Cent of Operating Revenues in 1920 to Only 44.5 Per Cent in 1936 and 44.8 Per Cent in 1937. The Figure for 1938 Will Be Not Quite So Good

America, and thus to sell more of it. We cannot do this while we have to pay $2.50 a ton merely for having it taken to the ships. You can afford to charge less and still make money. Therefore we crave a reduction of rates.

To which the Virginian might have replied: Only an enormous capital investment has made possible our fine transportation factory. If the Virginian had been constructed cheaply, if it had not spent more than fifteen millions on electrification in the early 1920's, it might be a little better off than other roads with the same revenues. Therefore our extreme efficiency belongs to us, somewhat in the way a patent belongs to the man who invents a device, and we deserve the money we make no less. Besides, we are not always able to return such a great proportion of our revenues to net as we did from 1934 through 1937. In such years as 1931 and 1932 we had only a couple millions left for dividends or surplus; and we wouldn't be showing if we hadn't virtuously retired a lot of our bonds a few years ago and thereby reduced our interest charges by more than a third. We earn what we are getting, and the trouble with you is that you can't bear to see us get it. You probably aren't interested half so much in lower prices for the people as you are in a slice of our profits. As capitalists yourselves, gentlemen, you surely would not like to have yourselves penalized because you are efficient and profitable.

BUT one of the peculiarities of capitalism is that it is essentially anarchical. To expand or even survive, no company can afford to guide itself by sympathy; as long as competition means anything at all, it knows that the

best defense and indeed the only hope for victory lies in a tireless, alert and savage offense. It is commonplace that industries have warred upon each other as fiercely as they did upon labor. In these enlightened days, their wars are governed by complicated sets of rules as are duels, and are fought by highly-paid experts who alone are privy to the endless ramifications and implications of those rules. These experts are known as corporation lawyers.

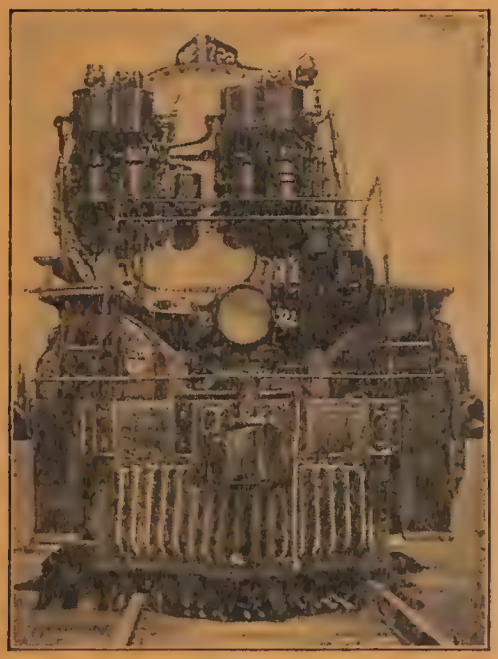
The coal company lawyers not having been spectacularly successful in obtaining a reduction of rates from the Interstate Commerce Commission, they revised their strategy. So into the story of the Virginian now enters that youthful but giant corporation known as the Koppers United Co. Koppers is an expanding corporation, seeking among other things little less than the domination of the eastern fuel markets. Nearly a third of the bituminous clearing the Virginia Capes is Koppers' coal, in Koppers' ships, bound for the coke and gas ovens in Philadelphia, New York City area, New Haven, and Boston. Total transportation costs are about $4.75 a ton, of which more than half goes to the railroads. The move for lower rates having collapsed, why not acquire the railroad? Henry Huddleston Rogers built the Virginian because he wanted an independent outlet for the coal properties in which he had sunk money. Was there any reason why Koppers could not pull the same kind of trick?

Indeed, there was every reason why Koppers would have an easy time of doing so. The Virginian practically depended upon Kopper's patronage. In 1936 coal which Koppers shipped over it accounted for more than a third of the Virginian's total revenues of seventeen millions. And that was only half the story. The Norfolk & Western and particularly the Chesapeake & Ohio enter the Virginian territory with branch lines, and their main lines are never very far away. It was perfectly simple for Koppers to transfer most of its business to the C&O and hamstring the Virginian for fair. On the other hand, it was also possible for Koppers to divert 1,500,000 to 2,500,000 tons ($6,000,000 worth of business) a year from the Chesapeake & Ohio to the Virginian. In brief, Koppers almost could make or break the Virginian; and whether it would have to break it obviously depended upon the attitude of the people who owned the Virginian.

Henry Huddleston Rogers having died in 1909, the control of the road went to his heirs, and theirs after them. Few if any of them, for a long time, have seemed remotely interested in the Virginian as a transportation machine. Only as a source of income they gave it their sustained admiration; and they never displayed a reluctance to get rid of it at a price which would enable them to reinvest the money to produce a higher income. The Virginian has been lusted after by more than one capitalist or group of capitalists; each time the heirs of Rogers were willing to talk business. At the time he was experimenting with the Detroit, Toledo & Ironton, Henry Ford let his face shine upon it and found it very much to his inclination; he figured that by building or hiring a short connecton between Ironton, Ohio, and Deepwater, West Virginia, he could own and operate a complete system from the Great Lakes to the Atlantic. He is said to have offered ninety millions for it. But his own rapidly languishing affection for the railroad business and the lack of enthusiasm for his offer bogged down the negotiations. After that the

Superintendent J. W. White of the New River Division Looks Things Over from the Princeton Station Platform

Banged and Bent by Their Heavy Burdens, These Hopper Cars Stand in the Princeton Yards Awaiting Repairs



One of the U.S.R.A. 2-8-8-2 Type Mallets on a Curve, Showing How the Front Set of Drivers and Cylinders Swivel Laterally

Pennsylvania, the Norfolk & Western, the Chesapeake & Ohio, and the New York Central wooed the estate.

Both the Pennsy and the Norfolk & Western came to terms with the stockholders, but the ICC disapproved of them both for the patent reason that the Pennsy would be apt to divert Virginian traffic to the N&W which it controlled, and that the Norfolk & Western's direct ownership would be no better. The idea of consolidation with the Norfolk & Western was an old one. The two roads parallel each other for 90 miles westward out of Roanoke, and savings might have been effected by joint operation over at least a part of this distance. The ICC plan for railroad consolidation allotted the Virginian to the New York Central, with which it connects at West Deepwater, and over whose tracks it operates its passenger train into Charleston, the capital of the state. As for consolidation with the Chesapeake & Ohio, it appears to be the most probable. More of that later.

KOPPERS' rather blunt and heavy club, therefore, was considerably more than adequate for the purpose. Soon began a round of legal poker which enabled the Koppers people to acquire control of the road from the Rogers heirs. What happened was this: A holding company known as the Virginian Corporation was set up. It "purchased" from the Rogers Estate 236,000 shares of Virginian Railway common stock (about 75 per cent of the common, and 40 per cent of the total voting stock) for $23,364,000—not in cash, but in five per cent notes—and nearly eight million dollars worth of its own stock, which, of course, was as yet worthless. Instead of keeping the Virginian Corp. stock, the Rogers Estate, as prearranged, sold it to the Koppers Company and the Eastern Gas & Fuel Associates (subsidiaries of Koppers United) for $7,870,600 in cash. Most of it in turn was sold to individuals connected with the Koppers enterprises and the Mellon family, which controls the Koppers Co. What this finagling amounts to is that the Rogers heirs got the equivalent of $31,234,000 for 236,000 shares of Virginian common, which is at the rate of $136 a share, a not prodigal price, considering the earning power of the Virginian. And this Virginian stock is now the legal possession of the Virginian Corp., which is owned by the people who control Koppers' United—for a total cash outlay of less than eight millions.

This happened early in 1937. The effect on the Virginian Railway was prompt and salubrious. Diversion from the Chesapeake & Ohio began at once.

Nuriva Mine, on the Main Line a Couple Miles North of Mullens

Partially as a result, the Virginian handled 11,318,771 tons of soft coal in 1937 (1,625,080 more than in 1936), just about up to 1927, the peak of its history. Which enabled it to show the best operating revenues since 1927, and the biggest net in history. The figures for 1938, despite the recession and what with the rate increase, exhibit little decline. On the other hand, the C&O took a bad licking. Other effects are problematical; but it is entirely possible that the Koppers interests may use their control of the Virginian to force a consolidation with it and the Chesapeake & Ohio, and so perhaps acquire a firm hold on both these wealthy coal railroads. Meantime, the Virginian is working at top efficiency, manufacturing more than three billion ton-miles of transportation a year (only in 1926 and 1927 was the output greater), at about the lowest cost known to man.

Such is the status of the Virginian at present. Its future obviously is resplendent; the world will have the joy and privilege of seeing the line functioning at comfortably close to capacity for a number of years to come. The Virginian could handle thirteen or fourteen million tons of coal a year without overtaxing its present plant. Not that it can forego new equipment for an extremely long time. While its electric locomotives are still comparatively young, its steam engines are over or close to the twenty-year mark. This does not necessarily mean they are

Headquarters of the New River Division (Everything West of Roanoke) Are on the Second Floor of the Roomy Station at Princeton

more expensive than new ones would be, since electrification rendered some of them useless and hence they have not turned in the mileage that most engines of their age have. On the other hand, the displaced machines were light affairs and not of much good for main line purposes. So, while allowing considerable latitude toward the rule that a locomotive is more expensive than a new one when it has reached the age of 20, the Virginian probably will be in the market for engines within a half dozen years, even though recent developments in the way of increased boiler horsepower for high-speed freight service mean little, it being under no necessity to accelerate operations.

LET us turn again to the functioning of this superb transportation factory. At the very top of the organization sits (occasionally) the board of directors, all twelve of whom save President Carl Bucholtz himself, are bankers or public utility magnates. Chairman of the board is 74-year-old Adrian Hoffman Larkin, senior partner in the law firm of Larkin, Rathbone & Perry and director of Brooklyn Union Gas and United States Industrial Alcohol. The others include 80-year-old William Robertson Coe, who married Mai H. Rogers, daughter of old Henry Huddleston (she died in 1924); their son William Rogers Coe; and Harry M. Addinsell, chairman of the executive committee of the First Boston Corp. and director of half a dozen other organizations, among them Cities Service Power and Light.

But this imposing array of corporate power and glory, for all the spiritual and monetary sovereignty it exercises over the railroad, has little to do with the operation of the line. The average

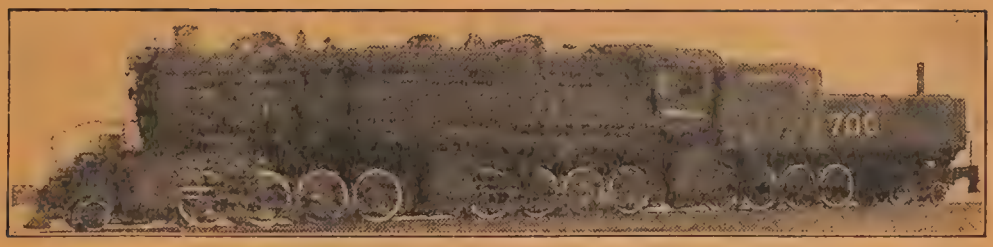
Virginian employee, though he usually has been with the road long enough to remember or to have heard about the great Rogers himself, would hardly be able to give a rational account of him; and the names of the present-day rulers would mean little to him. All he knows is the nature and function of his immediate boss, and that the big boss is burly Carl Bucholtz, who became president in 1934 after Charlie Hix died at the relatively youthful age of 71. Considering that not a few presidents may be rudely but not inaccurately described as glorified chief clerks, Mr. Bucholtz is distinctly the big boss. His job is to run the railroad efficiently; so long as he does that his word is law.

Hard-Working Carl Bucholtz, President of the Virginian, Began His Career as a Machinist's Apprentice on the Baltimore & Ohio in 1902

President Bucholtz is what is known as an operating man: he got his experience running railroads, not defending them in court or arguing shippers into using them. Starting his career at 19 as a machinist's apprentice on the Baltimore & Ohio, he advanced with commendable regularity. Then he went to the Missouri Pacific as maintenance of way inspector, and two years later (in 1910) to the Erie, as assistant engineer. At the age of 44 he was made general manager of the Erie's Western District; and in 1932 he answered the call of the Virginian to come as general manager. Early in 1934 he was elected to fill the place of Charles Hix, who died two days before Christmas, 1933.

Big, heavy, bald (he will be 56 on March 21), Mr. Bucholtz is also extremely modest and hard-working, devoting a dozen or more hours a day to his official labors, a habit of his with which his being a bachelor may or may not have something to do. He has a faculty of impressing employees with his considerable experience and knowledge, and of getting work out of them without being arbitrary or slave-driving. So far as anyone can discover, he hasn't been photographed in years. Recently he brought in as general manager his old assistant on the Erie, William White, who relieves him of much work he otherwise would do. Though he is an operating man, he does not neglect opportunities for making contacts with coal dealers and other shippers. The Virginian, for example, has to haul empty trains westbound from Norfolk, so it tries hard to create additional paying traffic in that direction, and Mr. Bucholtz does not leave a prospective load unsolicited.

Still, it is coal that comprises and always will comprise the bulk of the Virginian's traffic. A large proportion of the coal, provided there is a market for it, will continue to move over the Virginian regardless of solicitation. The biggest problem, therefore, is efficient operation, or since that has been



A Big Lemon Was the Virginian's "Triplex" Mallet, Built in 1916 and Dismantled Four Years Later

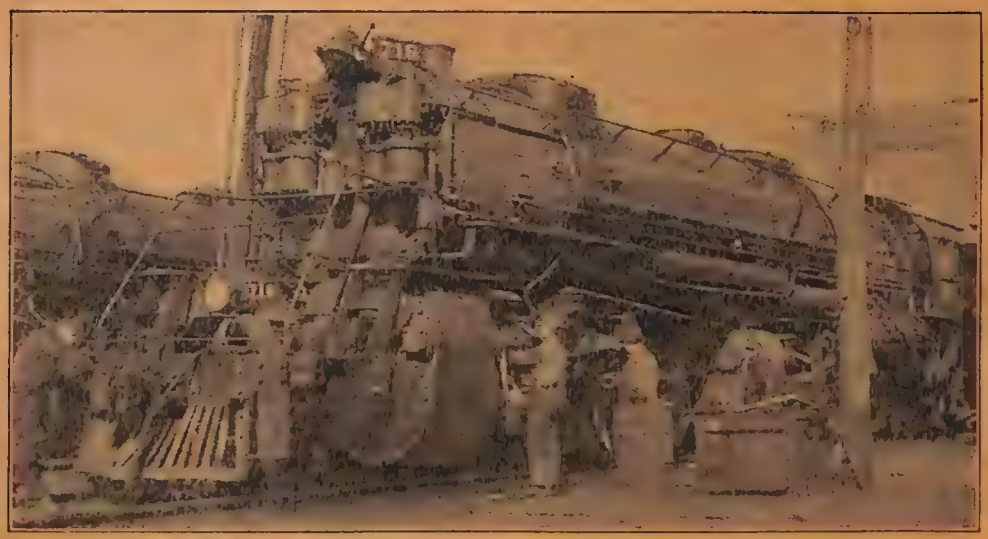
achieved to a very high degree, the maintenance of the lofty standard, if only by aiming even higher.

WHEN the Virginian was completed it began operating enormous trains almost immediately. Considering the as yet small revenues and the large amount which had to be paid as interest on its great investment, it began to display its potential earning power when very young. At the tender age of one (in 1910) its gross revenues were a tenth of what they are now, but operating expenses took only 70 per cent of them. Of course, interest alone exceeded two millions and hence was actually larger than gross; and a net deficit would have been impossible to avoid even if operations had cost nothing.

It was really making money by the time it was five. In 1914, gross was better than six millions; operating expenses were only three and a half millions; interest had been reduced by nearly a million as a result of the conversion of bonds into stock; and there was a nice balance (a million and a quarter) remaining. Had not business increased beyond five millions gross annually, it is true, the sourest predictions of the line's contemnors would have been justified. Under such circumstances, the Virginian would have been too much railroad plant—too much transportation factory—for its output. But once that output assumed moderate proportions, the virtues of its fine plant and equipment began to earn a far more splendid reward than if the line had been constructed less generously.

The Virginian's operating technique, even in its extreme youth, was essentially the same as it is now. It simply hitched every engine to the heaviest train it could handle; and to get up the hill to Clarks Gap it assigned as many engines to each train as conditions would allow. Those "conditions" were (1) the tunnels, whose smoke and gas the engineers and firemen used as an issue in the strike of 1923, and (2) the tonnage which a single road engine could haul from the top of the hill to Princeton.

Heaviest Steam Locomotives on the Virginian Are the 2-10-10-2 Mallets, Which Weigh 342 Tons Without Tender



No. 716, One of the 2-8-8-2 Mallets, Undergoing Repairs at Princeton

Mallet engines of the 2-6-6-0 and 2-8-8-2 types were built from 1909 through 1923. In 1916 Baldwin constructed for it the world's largest and most powerful locomotive, the famous 2-8-8-8-4 or "Triplex" engine, which used three sets of cylinders and drivers (one under the tender), and developed more starting tractive force than any steam locomotive built before or since. It exerted a starting tug, when run in "simple," of 199,560 pounds. But its boiler, despite the great size, could not make steam enough for so many cylinders, and four years later this lumbering behemoth was dismantled and rebuilt as two smaller engines. Today steam designers have no trouble putting their fingers on its defects, such as its inadequate grate, tubes that were too long, its comparatively low boiler pressure. Today, indeed, they doubtless could produce an engine not only exerting a comparable starting power, but developing many times the power at normal operating speed. In 1918, though, the attempt was more or less of a failure, and the failure caused the Virginian to cast about for a different kind of locomotive for heavy duty.

At that time it was rolling its coal drags in the following fashion: Three steam engines would haul a 5500-ton train up the hill from Elmore at seven miles an hour: a 2-8-8-2 type at the head end and two of the 2-10-10-2 type mallets (completed in 1918) at the rear. The pushers were cut off at the summit, and the 2-8-8-2 dragged the 5500-ton train to Princeton, where a yard engine helped it over the next hill. Another helper was necessary over the ten miles from Whitethorne to Merrimac, where the grade is .6 per cent. At Roanoke, trains were filled out to 14,000 tons, as they are now.

We have already described the manner in which one electric now handles 10,000 tons all the way from the summit to Roanoke without a helper, and how two of them hoist 6000 tons up the big hill. This was the kind of thing the Virginian tried to do with steam. Failing, it turned to electrification; and in May, 1923, announced the details of what at that time was the largest electrification contract ever placed. Amounting to over fifteen millions, it

Covel, a Mining Camp on the Main Line Near Micajah

was awarded to Westinghouse Electric and Manufacturing Co. Despite the enormous expense (more than $100,000 a mile), the Virginian was convinced it would be cheaper in the long run. To be cheaper, it obviously would have to save nearly a million dollars a year, or the equivalent of the going interest charges on the total amount required for electrification.

Whether it has been that is hard to determine with utter accuracy. Looking at the operating figures, the answer might seem to be yes. With average freight rate just about stationary since 1925, with labor costs higher, the Virginian has been reducing its operating ratio (amount of operating revenues required for operating expenses) steadily. It was 62.4 per cent in 1925, when electrification was completed, and only 44.8 per cent in 1937, and the trend between the two was almost evenly downward. In 1937 it manufactured 3,066,000,000 ton-miles of transportation at a lower total cost than 2,531,000,000 ton-miles in 1923. But these figures are not very conclusive as a basis for determining the effect of electrification, since their proportions can be approximated on several well-managed steam roads such as the Bangor & Aroostook (RAILROAD MAGAZINE, December, 1938) and the Pennsylvania.

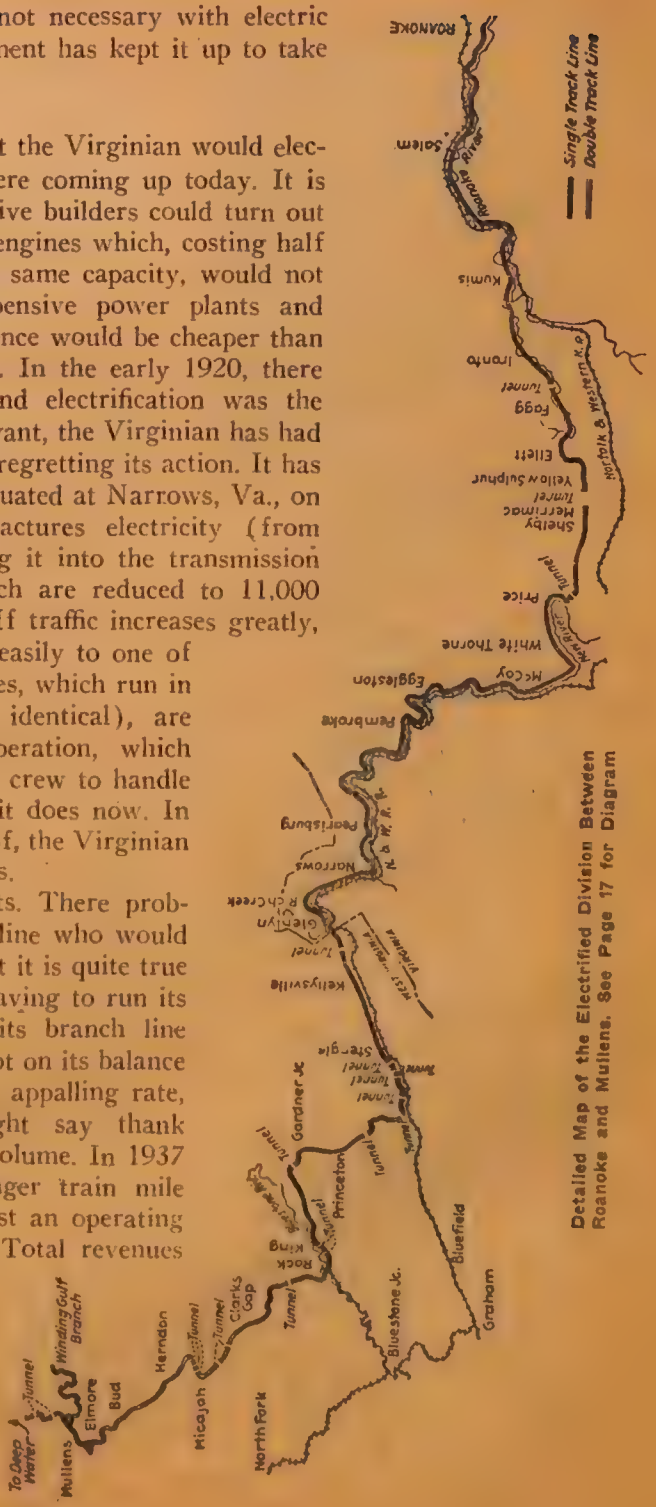
It is easier to point to specific advantages: in addition to those mentioned, afforded by a direct comparison of the size of the trains and number of men involved, there is the matter of downhill running. Guiding the steam trains down the grade to Kellysville and Fagg was a slow and difficult ordeal. The electrics make use of regeneration; the motors are cut in and act as generators, not only returning considerable power to the line but also setting up enough resistance to roll down the hills at fourteen miles an hour without using the brakes at all, except of course when coming to a dead stop. These factors save money directly and also make it possible for the Virginian to handle twelve million or more tons of coal a year without congestion. As a matter of fact, the double track from Mullens to MX Tower, installed

shortly after the War, is not necessary with electric operation, but the management has kept it up to take care of future expansion.

THIS does not mean that the Virginian would electrify if the problem were coming up today. It is possible that steam locomotive builders could turn out 8000- or 9000-horsepower engines which, costing half as much as electrics of the same capacity, would not have to depend upon expensive power plants and trolley wire systems, and hence would be cheaper than electricity could hope to be. In the early 1920, there was no such possibility, and electrification was the way out. What is quite relevant, the Virginian has had not the slightest reason for regretting its action. It has its own generating plant, situated at Narrows, Va., on New River, which manufactures electricity (from coal) very cheaply, shooting it into the transmission wires at 80,000 volts, which are reduced to 11,000 volts for the trolley wires. If traffic increases greatly, the system can be changed easily to one of 22,000 volts. And the engines, which run in triple units (each unit is identical), are designed for quadruple operation, which patently will enable a single crew to handle a third more tonnage than it does now. In every respect you can think of, the Virginian is a railway without regrets.

Or almost without regrets. There probably isn't an official on the line who would care to be quoted on this, but it is quite true that the Virginian regrets having to run its daily passenger train and its branch line connections. It is the only blot on its balance sheets. It loses money at an appalling rate, though the Virginian might say thank heaven not at an appalling volume. In 1937 average revenue per passenger train mile was only thirty cents, against an operating cost of at least twice that. Total revenues for the year were only $48,177.

Worse, the dang main line train gets in the way of freight, even on its present leisurely schedule, which is deliberately al-



Detailed Map of the Electrified Division Between Roanoke and Mullens. See Page 17 for Diagram

Last Bad Accident on the Virginian Occurred Nearly Five Years Ago, When an Engineer Overlooked His Orders and Bumped Into Another Train near Cirtsville, 30 Miles North of Mullens

lowed to remain leisurely so it can make up time if it has to go into a siding to wait for the more important freight. As if to discourage patronage, the cars, though of fairly recent steel construction (some have six-wheel trucks) provide the kind of accommodations which demagogues used to denounce when they took to lambasting the railroads. To anybody remotely interested in observing a railroad magnificent in every other respect, however, a trip on one is compulsory. There is no better way to get an idea of the fine track, the clean white crushed stone ballast, the well-kept buildings (painted a fresh shade of orange), the multitude of tunnels, the immense coal trains than to stand on the back platform of Number Four from Deepwater to Roanoke and watch the rails recede.

Passenger business was not always so insignificant. Until the late 1920's it flourished, and at its peak, before the War, it came to nearly a million dollars a year, a substantial part of gross revenues. In those times there were several trains a day, including a sleeper express. As luck would have it, the decline began shortly after the Virginian bought six fine new passenger engines in 1920. And when the movement for improving Virginia's highways, which came later than in most states, got under way, it practically killed the railroad's traffic. Most of the passengers nowadays are deadheads or those who cannot find another way of getting to their destinations. But neither the states nor the municipalities it serves will allow the Virginian to pull off these trains.

And since they lose no more than $50,000 a year, they are not half so much a source of worry as of annoyance. What the Virginian fears, if anything, probably resolves itself into the

One of the Tunnels on the Electrified Division South of Princeton

proposition that misery loves company, and therefore that a utility which is prosperous when most people aren't is regarded with suspicion if not downright bellicosity. This state of mind perhaps has been a factor in its recent labor troubles. In 1937 the Virginian lost a Supreme Court battle about labor policies, and was forced to recognize the American Federation of Labor as the sole representative (instead of the company union) of its shopmen. And while it hasn't recognized the Brotherhood of Locomotive Engineers or the Brotherhood of Locomotive Firemen and Enginemen since the strike of 1923, it not only adheres to standard wages but imposes no mileage restrictions, so that its engineers and firemen draw uncommonly large checks.

The Virginian simply falls in the unique position of being apprehensive because it is in such apple-pie order. It has attained its old prosperity and promises to go much higher. It has a future. It is an absolute economic necessity. The only thing dubious is on what terms it will function as a necessity. Naturally, its managers desire very much for it to go on being a splendid transportation factory and a profitable one too.

Many Never Suspect Cause Of Backaches

This Old Treatment Often Brings Happy Relief

Many sufferers relieve nagging backache quickly, once they discover that the real cause of their trouble may be tired kidneys.

The kidneys are Nature's chief way of taking the excess acids and waste out of the blood. Most people pass about 3 pints a day or about 3 pounds of waste.

Frequent or scanty passages with smarting and burning shows there may be something wrong with your kidneys or bladder.

An excess of acids or poisons in your blood, when due to functional kidney disorders, may be the cause of nagging backache, rheumatic pains, leg pains, loss of pep and energy, getting up nights, swelling, puffiness under the eyes, headaches and dizziness.

Don't wait! Ask your druggist for Doan's Pills, used successfully by millions for over 40 years. They give happy relief and will help the 15 miles of kidney tubes flush out poisonous waste from your blood. Get Doan's Pills.

Back in the Days . . . By Harry C. Temple

IN THE CLEAR. Back in the Days of Oil-Burning Headlights, the Enginemen Used This Method of Dimming Their Lights While on a Siding Waiting for a "Meet," Which Also Permitted Oncoming Trains to See Engine Numbers from a Distance

TRUE TALES *of the* RAILS

Actual Happenings Told by Eye Witnesses

Girl Operator

By PETER JOSSERAND

A WAVE of memories swept over me the other night when I read Harry Bedwell's story, "The Careless Road," in the February issue of *Railroad Magazine*. This story, as you know, is fiction built around a boomer op who meets a girl telegrapher with dark red hair and gray-green eyes; and it recalls an actual experience in my life.

The young lady I'm going to tell you about had neither dark red hair nor gray-green eyes. I was not exactly a boomer, in 1929, when I hired out on the Missouri Pacific as relay operator for the duration of a vegetable rush, although I had several roads to my credit—or discredit, I add, in view of the fact that one of those roads had fired me from a dispatcher's job for failure to report for duty. But that's a different story. Right now I'm concerned with Bedwell's theme, "boy meets girl"; so I'll start from the very beginning.

I was a slim, boyish-looking fellow of twenty-six. I was working at Houston, Texas, on the vegetable-rush job when a boomer friend from the Houston Belt & Terminal breezed into the office to chew the rag over a dinner table. While waiting for me to go off duty, he sat down to a vacant position and started talking to someone on the wire. I paid no attention until I was relieved. Even then he was still engrossed in the confab. I asked: "Who in the world are you talking to?"

He said: "Girl operator up the line."

Now, female brass-pounders were few and far between, even ten years ago, and most of those left in service were survivals from World War days. Being interested, like most young fellows, I wanted to know if this one was good-looking.

"I've never seen her," the boomer replied casually, "but they say she is. And she's just a kid. Nineteen."

What spirit of adventure or what lying braggadocio prompted my next seven words will always remain a mystery to me. However, looking back now, I realize that those seven words changed the whole course of my life.

"Tell the girl that I know her," I directed my friend, who was still sitting at the key; and he did so.

"What's his name?" the sounder clicked back.

"Tell her she wouldn't remember my last name," I coached. "The first name is Pete."

Up to that time it had been merely a joke; now came an unexpected turn of events. I read from the sounder:

"Let me talk to him."

I began to repent of my sudden impulse as I sat down in the seat which the boomer vacated with alacrity.

"Josserand," he consoled, "you've always had a way with women, but this is one time your winning personality, in ten easy lessons, isn't going to do you any good;" and he smirked expectantly. I knew he was looking forward to a horse laugh at my expense.

Reaching for the bug, I opened the key, mentally determined to send so fast and use so much Phillips Code (the abbreviations I had learned while working for the Associated Press) that she could not read what I said, thus ending the whole matter with the joke on her.

"G E. TS PETE JOSSERAND. U WDN RMB MY NA, ONLY MET U ONE NI WN U WR IN A HY." (Translated into English, it reads: "Good evening. This is Pete Josserand. You wouldn't remember my name, only met you one night when you were in a hurry.")

To my surprise and, I admit, admiration, the young lady was not in the least disturbed by either my code or speed. At least she wasn't a ham, I thought.

"Where did I meet you?" she inquired.

"Where shall I say?" I asked the boomer, who was regarding me with the expression of a Cheshire cat.

"Fools rush in where angels fear to tread," he quoted smugly. "Your guess is as good as mine. Two-bits you guess wrong."

"Called," I told him. Then, opening the key I tapped out, "Longview."

"I used to live there," came the unexpected reply. It was my turn now to grin, but this expression quickly faded as she continued, "Who introduced us?"

While I was fumbling around for an answer, the boomer encouraged: "Two-bits more you don't guess that one."

"I'll give you a chance to get even," I told him, realizing, however, that I would be the joke of the telegraph fraternity if I got caught lying.

"Can't recall his last name," I said slowly on the wire, searching frantically for some solution. "I believe his first name was—Jack." The word was a blind guess.

"Jack Bollman?" she asked.

"That's the fellow," I said, eyeing my tormentor with satisfaction.

"I used to go with Jack," the sounder chattered. "I'm sorry, but to save my life I don't seem able to place you."

"Don't apologize," I said. "I'm not such a spectacular person that I expect people to remember me under such circumstances."

We talked a few minutes longer about nothing in particular. You may rest assured that I accepted the first opportunity to bring the conversation to an end. By sheer luck I had squirmed out of a tight spot and was fifty cents richer as a result, the price of a good meal; and since I never expected to see this young lady, there was no use in giving her a chance to ask any more embarrassing questions.

The wire interview over, my boomer friend and I headed for a beanery, to talk over old times. As we were getting ready to go, he asked:

"Would you mind making a guess as to which pony will win at Tia Juana tomorrow?"

BUT the episode with the mysterious op was not ended. It was, on the contrary, only just beginning. She called me again the next day, and on many days after that, and I called her now and then when I had a free mo-

ment. I learned that her name was Grayce Edington and that she was a most likeable wire personality.

As the weeks went by, I began to look forward to those times when I was not busy and could talk with her a few minutes. Miss Edington seemed to be jolly and good-natured, somewhat of a tease, with a sincerity that caused me to be a little ashamed of my deception. She soon grew to recognize my style of sending. The prompt manner in which she answered the wire led me to believe that she, too, enjoyed our dot-and-dash visits.

From the fellows in the office I learned that she was not married, that her father was the MoP agent at Grapeland, Texas, where she worked, and that she had started telegraphing two years before when her father partially lost his hearing and could no longer handle the dispatchers' phone. To prevent his being retired for physical disability, Grayce was working a clerical job and doing his telegraphing by special arrangement with the superintendent. She related to me on the wire how her father had taught her telegraphy with her A B C's "just for fun" and she now liked her work immensely. It seems she'd been infected with the peculiar germ that gets into the blood of all railroaders, like the girl in Bedwell's "Careless Road."

One day, with dismay, I observed a slackening of the vegetable rush for which I had been hired as relay operator. It indicated the approaching end of my employment. The dismay was not entirely due to the fact that I would be out of work, for I had saved a little money and was still young; it was due in part to my reluctance to leave without seeing my invisible wire companion. But I resolutely put aside sentiment and planned to head west in search of another job. When the time came for me to go, the Superintendent of Telegraph called me into his office and announced tersely:

"Man went to the hospital in Palestine today. You're through here today unless you want to go up there."

I thanked him politely and accepted the new job. Next morning, as No. 26, a local passenger train, eased out from under the shed of Union Station, I settled myself comfortably and took an employes' timetable from my pocket. Running my eye down the schedule column of No. 26, I saw they had only one meet with a first-class train, No.21, the *Sunshine Special,* at Grapeland. *Grapeland!* It had not occurred to me that I might pass through there. So I would not leave the country without seeing "ED," after all!

Besides, Palestine was only twenty-five miles from Grapeland, and if I didn't see her today . . . . My thoughts trailed off into speculation on the girl's appearance. Would she be the grand person I had mentally pictured from our conversations on the wire?

The Grapeland siding was located on one side of the main track, while a depot stood on the other. My train stopped on the siding just as the *Sunshine* was speeding by. It was not until their observation car had cleared the south end of the platform that I glimpsed a slender figure whom I judged to be Grayce Edington. Evidently she had just handed up orders for No. 21. She was retrieving three train-order hoops and was starting back for the office when I saw her.

Even before I could distinguish her regular features and large hazel eyes, I was aware that the girl had poise, poise above the average for a kid of nineteen. Her tailored linen suit seemed moulded to the graceful curves of her

body. From the tips of her well-shaped feet to the top of her curly blonde head, ruffled now by a light breeze, she was all that I had pictured—and more. To me she was beautiful. Her whole being expressed the glory of youth. Especially the smile which lit up her face as she waved at the conductor.

Then her eyes ranged along the coaches, lit momentarily at the window where I sat. I beamed, and spoke. Tilting her head at just the proper angle to rebuke me, she turned and entered the depot. Somehow I felt disappointment, but I would not have had it otherwise.

ARRIVING in Palestine, I went directly to the telegraph office and was assigned my hours. Then I sat down at a vacant position and called "GR," feeling a distinct thrill when she recognized my sending.

"What are you doing in Palestine?" she wanted to know.

"Going to work up here a few days," I replied. "I certainly like the way you turned up your nose at me when I came through there on Number 26 today."

"Was that you? I didn't recognize you," she added apologetically.

"You'll have to let me run down and give you a good look some time," I chided.

"Fine," she snapped back. "Be glad to see you any time. Just let me know in advance."

The following Sunday I was debating with an op named Terry as to the most amusing way of spending the day, as we sat over our coffee cups in the beanery after breakfast. Terry was a red-headed, freckled-face guy, full of the very devil.

"Let's go down and see the operator at Grapeland," I suggested, telling him of my previous experiences. "I'd like to know if she's half as sweet as she looks."

"Okay by me," he replied. "But I'll be only a spectator, and if you get kicked in the pants I'll enjoy it immensely."

No sooner said than done. I called "ED" on the wire and received a cordial invitation. Fifteen minutes later we were bumping down the road in Terry's wheezy old Model T. We reached Grapeland in due time and without mishap.

"You've been talking ever since I met you," I told the redhead as we climbed out of the car, "and if you stop now and give this young lady a chance to find out she doesn't know me, I'm gonna wind the crank around your neck."

Breezing into the office as if it belonged to us, we found Miss Edington surveying the results of an overturned ink bottle, the contents of which had ruined her yellow frock.

"Hello, Grayce," I greeted her boldly, taking her well-shaped little hand in my right while I dragged Terry to the front with my left and introducing him. "Looks like you've had an accident."

She scrutinized me closely, with a puzzled expression. And then:

"It was clumsy of me," she said in a rich, soft voice. "You'll just have to excuse my appearance and I'll try to do better next time."

"You're quite lovely—ink and all," I replied, and I meant it; but there was a doubt in my mind that there would ever be a next time.

We assisted in remedying the havoc wrought by the ink, to the best of our ability, and soon all three of us were chatting together easily—mostly about railroading. Our hostess displayed un-

"You're Quite Lovely—Ink and All," I Replied, and I Meant It

usual insight into her work. Even talking shop with her was a thrill. It was with genuine regret that I said good-by.

During the rest of my stay at Palestine, "ED" was even more cordial than before. When I was relieved at Palestine and instructed to report to the San Antonio relay office, I could not make up my mind to leave without seeing her again. So I went back to Grapeland, accompanied by Terry and his girl friend, to make a foursome.

During an evening I shall never forget, I confided the details of my previous deception to Grayce, wondering with no little trepidation what her reaction would be. The four of us had taken a picnic lunch to the side of a beautiful lake in the hills. It was a balmy spring night. A full moon silvered our figures, and the empty lunch basket, and the water and everything else so far as we could see. "ED" waited until I finished my story. Then her soft musical laugh ended my suspense.

"You certainly put it over in great style," she said. "Honestly, I'd been wondering how I could have completely forgotten you. How long will you be in San Antonio?"

I sighed with relief.

"Just a few days, I suppose. Then I'm heading west to find a job dispatching."

"You're not a dispatcher, are you?" she asked.

"I *was*," I said, slightly amused. "Don't I look like one?"

"But you're not old enough," she protested. "All the dispatchers I know are old men."

"Yes, yes," I smiled. "That's what I hear every time I ask for a job. Nevertheless, I am still of the opinion that the thing which keeps the wheels of a railroad rolling is brains—not gray hairs. Eventually I'll find a chief who will give me a chance."

"Why don't you try to get on over here?"

"I have," I said, "not only here, but in more places than you have fingers and toes. None of them would take me seriously or give me a chance to demonstrate my ability. I'll try San Antonio when I get there."

"Well," she commented, after looking at me for a moment, "I hope you can get on over here; the Mop is a great road to work for."

"They have one swell operator," I replied. Then: "Could there have been anything personal in your wish?"

Her eyelids drooped for a moment; and as she raised those honest, shining eyes to mine she said softly: "Yes, Pete."

That night I left Grapeland very late. I was firmly determined to stay on the Missouri Pacific as long as I could keep body and soul together by doing extra telegraph work, hoping that some day I might talk one of the chief dispatchers into a steady job. I had plenty of reasons now for sticking with the MoP, and all of them centered around Grayce Edington.

Well, I finally got a toe hold on the dispatchers' seniority roster, and worked in Houston, Palestine, and San Antonio. I gave "ED" many orders and told her a lot of things some of them about railroading, but mostly otherwise. And then, unlike the boomer op in Harry Bedwell's story, I married the girl.

That was some years ago. We now have two children, Peter and Judy. It wouldn't surprise us at all if, as time goes on, either or both of them follow after their mother and dad and Grandpa Edington, and start pounding brass on the old Missouri Pacific. On the other hand, it may take a new World War to make Judy into a girl operator.

Railroad Luck

By J. H. KELLY

DROPPING into the cook car the other day to get a cup of Java between track lists, I ran into a bunch of the road crews spinning yarns about the narrow escapes and tight places they had been in during their collective railroad service and what a big part luck played in them.

I knew, of course, what had brought on the conversation. Everybody seemed to be talking about that accident to the old 442. This particular engine was pulling Number 47, the day before, and had picked up to sixty-five miles per hour when she threw a side rod. One of the men in the cook car, Tom Smith, who had been deadheading on 47 at the time, told his listeners that if the pin had sheared off at any other point in the drivers' orbit, the rod would have struck a tie, catapulted the engine over, and played havoc generally.

"Just luck!" said Tom.

I'm not mentioning actual names—although everything else in this story is true—because I don't want to get anybody in bad. As I said, they were all chewing the fat about the 442; and Jim Mallory was telling the boys how he had inspected her after she was hauled back to the shops, and he could have stuck his head through the hole which the side rod made in the air reservoir.

"Another foot revolution of those drivers," he concluded, "and the side rod wouldn't have hit the air tank; and you know blamed well that when that engine stopped, she'd have been in the ballast on her side. Yes, sir, what do you think of that for luck?"

The boys nodded. Silence reigned for a moment. I stepped up in front of the stove and poured myself another mug of coffee. Knowing the group well, I asked: "Would you fellows like

to hear of a lucky break I had once?"

Tom snorted. "Aw, g'wan, kid, you're a clerk! What narrow escape could you have had? Did you stumble over a waste basket or fall off the desk?"

That brought a laugh, of course, but one of the brakemen interceded: "Aw, give the guy a chance. Maybe he has a real yarn."

After a few grunts of assent from those present, I told my story, just as it happened. I don't think they all believed it, although a couple of the boys vouched for the facts as soon as I finished. Said they'd heard the incident before. So I'll pass it on to you, a piece of sheer luck that allows me to be on duty today as a yard clerk at Newport News, Va., instead of hobbling about on crutches or pushing up the daisies.

It was in 1929 that I started to work for the C&O—at Richmond—but I was cut off in 1932, the peak year of the depression. Later I was called back to service. If I hadn't been cut off, what I'm about to tell you would have occurred just the same, but not to me.

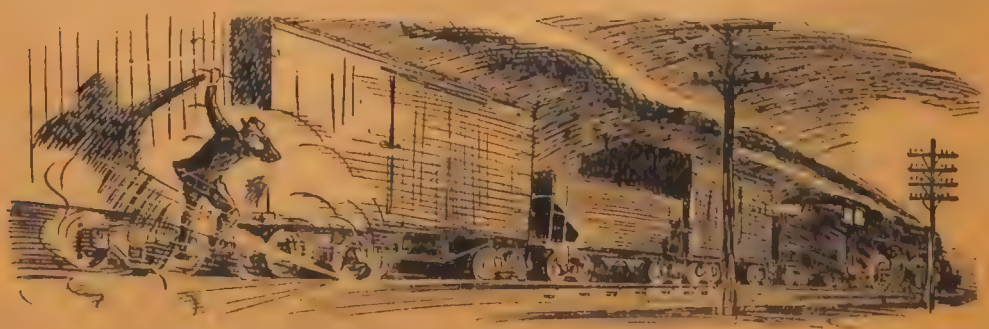
My annual pass was taken up at the time I was furloughed, leaving me to get back the best way I could to my old home, forty-seven miles up the James River. Somehow, no railroad man likes to pay fare, so I decided to ride Number 93, the westbound manifest, and hop off when we reached Pemberton, near my home. Selecting a flat-bottomed gondola on the train, I settled myself for what I thought would be a routine journey; and we pulled out of town.

But we hadn't gone far before I heard a brake sticking about eight cars ahead of me and, as we gained momentum, sliding the wheel. The thought worried me terribly. I realized it was too far ahead for the train crew to notice.

At first I tried to attract the attention of either or both ends of the train. Failing in this, I started clambering over the hopper bottoms between my car and the one with the brake set.

Time was precious. I'd heard old-timers talk about what generally happens when a wheel slides a few miles, and I didn't want it to happen to me. That baby sure put up an awful racket. I was hoping someone would hear it. Anyhow, I began climbing over the ends of cars and through the hopper shelves, in a desperate effort to reach the head end before it was too late.

Progress was slow. The hoppers and the distance between car ends naturally retarded my frantic efforts. At length I decided to look out at the wheel



I Decided to Look Out at the Wheel to See What Condition It Was In

to see what condition it was in. Standing on a side-ladder step, I peered ahead. When I got a glimpse of what was what, I nearly lost my balance. Not one revolution had been shaken out of that wheel since we started, and the whole disc seemed to be glowing a beautiful cherry red! Moreover, the flange on the rail side was gone and a four-inch flat was dragging the rail!

Well, in that instant I saw the Pearly Gates opening wide. I roughly estimated that we were hitting her up at thirty miles an hour; and, trying to figure how many more yards we could travel before the smash-up, I made my precarious way across the car with the dragging wheel.

I had not run far when the world came to an end. Or so it seemed. I was thrown flat, sliding on my stomach almost the rest of the car-length. I knew, of course, the wheel had burst. Into my tortured brain came the flash that within the next second the car would go over, with me underneath. I braced myself for the inevitable.

And then, bewildered, I found that the entire train had stopped in emergency. I wasn't going to be flattened out by tons of steel after all. It took a moment for me to regain composure, to adjust myself to the fact that Death was taking a holiday.

Slowly, very slowly, I climbed down the side ladder and walked over to take a squint at the broken wheel. What I saw there turned my legs to macaroni. I just folded right up and sat down on a tie on the adjacent main line, and looked, and looked . . .

I was still looking when the train crew came up. Heading the procession was Bob Johnson, the grizzled old conductor. And when Bob noticed what I was staring at, he just sank down beside me and breathed, "Good God!"

I hadn't seen the wheel burst, because at that time I was racing for dear life along the top of the car. So I can't explain it. I wouldn't know what had caused the bursting wheel to throw off a sharp-edged segment measuring seven inches. I wouldn't know why, of all places, that shard had to fly up and sever the air hose between the cars directly behind me. Or why the air had rushed out so completely as to stop that broken wheel with the bursted portion on top.

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EX-LAX

THE ORIGINAL CHOCOLATED LAXATIVE

At all druggists

Like a Flying Trapeze

The Huge Timber "Sailed Through the Air With the Greatest of Ease"

By FRANK SMITH

DURING my twenty-odd years as a boomer switchman, shifting over the country, I have found myself in some pretty tight spots, one of which nearly marked finish to my meanderings.

It was back in the winter of '14. A stiff blizzard was hammering the yards of one of the trunk lines skirting the Chicago district, when I dropped off a manifest, nearly frozen from hours of riding the tops, and badly in need of a stake. The yards were plugged to capacity and lay blanketed under a heavy snow. And as every available engine was being pressed into service in this kind of weather, I knew that an experienced rail could get a job for the asking.

"Hiring any switchmen?" I asked, collaring the yardmaster at his desk.

He pushed a sheaf of papers to one side, gunned me from brow to brogans. "What experience have you had?"

"Fifteen years," I said.

"Any service letters?"

I handed him a packet of references I had collected from previous roads.

He fingered through a couple and tossed them over to his chief clerk, who was sitting over at another desk, with: "Give this bird an application."

I filled in the form the clerk gave me, and handed it back.

He gave it the once-over. "We're going to use you on that train yard job," he said. "Report to Swede Larsen, foreman of the last trick"—and he added, eyeing me speculatively: "He's short a pin-puller."

The train yard job! Pulling pins—and for the "big Swede"! There wasn't a boomer in the racket who wasn't acquainted with that train-yard pin-pulling job and the rawhiding Swede, either from actual experience or hearsay. But, as I said before, I was in a pretty bad way and needed a stake.

"Okay," I agreed, taking the book

of rules and switch key that the clerk had fished out of the desk drawer; and after snatching a few hours rest in one of the yard shanties, I ambled over to look for the Swede.

"You showin' for this job?" boomed a voice as I stuck my head in the train-yard shanty.

I looked up. A big square-jawed figure in tassel cap and mackinaw was measuring me off, twisting a wad of waste around in a lamp globe.

"I am," I told him.

"Work this job before?"

I shook my head. "My first day in the yards."

He tossed the piece of waste in an open stove and snapped the globe in his lamp. "Boomer, huh? Well, you'd better be a good one."

I just looked at him. Could see that I'd have to hit the ball or else—

"The galloper's over at the pit gettin' her fire cleaned. When the hogger gets through oilin' her around, fetch 'er back to the job," he rumbled.

WHEN I returned with the engine, the Swede was pacing back and forth on the lead. I gave the hogger a stop sign and stepped off the footboard.

"You're followin' the galloper," said the Swede, coming over to the engine. He jerked his head toward the hind man, coming out of the shanty. "Me an' Olie here're gonna reach in on 27 and get ahold of a cut. You stay out here and keep the switches lined."

The Swede and the one called Olie swung on the footboard. As the engine rolled up the track the Swede threw back over his shoulder: "The hogger'll give you a blast when we get 'em coupled together. An' when we come at you, start throwin' them legs."

I was out there on the lead stomping up and down in a vain attempt at keeping my feet warm, when the hogger signalled for the right of way. Tossing him a highball, I slipped off my top coat, prepared for the worst.

"Grab the hind end and ride 'em round that curve," bellowed the Swede, dropping off the head end.

I ran back along the string and made the stirrup of the hind car, my eyes glued to his lamp. Rounding the curve, the Swede whipped his lamp horizontally across the tracks, and the cut of cars jammed to a stop.

The lamp went over his head, swept down across his toes in a wide, sweeping arch—an exaggerated kick sign. And as the big Mallet belched a spout of fire and cinders and lurched against the cars, I reached down and lifted the pin on the first cut, hit the gravel at the "stop" sign, and made for the next cut. I got the stirrup just as the Swede signalled for another kick.

Another "stop" sign. I lifted the pin, hit the gravel running, and made for the next. Another "kick" sign, and another pin. Another kick—a pin. A kick—a pin. Kick—pin. Kick. . . .

I was bouncing on and off the cars like a monkey on a string of hot griddles. Soon we were down to the last car: a flat car loaded with eight by eight timber, some sixteen feet in length. I swung on the footboard of the engine, waited for the kick.

The Swede was about twenty car-lengths away, his lamp hanging motionless at his side. I figured that the last shot hadn't been kicked hard enough, was fouling the lead, and he was waiting for it to creep into the clear. Soon the lamp went over his head, poised there for a split second, and swept down across his toes. And at the second exhaust of the old girl I reached down and nipped the pin.

NO SOONER had I done this than the Swede discovered his error. That last shot wasn't going to clear—was fouling the lead!

He raced excitedly towards the engine, giving the hogger a "slow" sign. But the pin, having been lifted, wouldn't drop back into place while the knuckles of the drawbars were frozen together. And when the hogger took the sign, the car of timber shot away from the engine like a pellet out of a sling and went thundering down the lead, with me clambering to the top of it.

When I saw the "slow" sign and realized our plight with that pin already lifted, I swung from the footboard and over onto the car of timber. I figured on making the other end, at which was the brake-staff, setting the brake in time to keep part of the railroad from becoming flying debris.

But reaching the top I discovered that I hadn't sufficient time to carry out my plans; and to jump, at the terrific rate of speed at which we were boring down on that stalled car, would have spelled curtains.

I wabbled towards the center of the load. I'd take a little spring upward just before impact, come down as the cars were settling, and trust to fate. I had often executed this little trick before but, of course, never at such terrific speed.

The Swede's hard-boiledness had now melted. He knew, in giving that "kick" sign before that previous shot had cleared, he would have a lot of difficulty in cooking up an alibi.

Anyhow, just as I was about to take the spring—I guess my timing was a little off—there came a sickening crash! My legs went out from under me, my lamp went hurtling through space, and I sprawled spread-eagle on an eight by eight piece of timber that had ripped loose from its props and was shooting the length of the load. Like a flying trapeze, it "sailed through the air with the greatest of ease."

Another crash! The end of the stalled car gave way like so much plate glass; and I, astride the timber, went ploughing through it.

Dazed and scratched up a bit by flying splinters, but otherwise uninjured, I scrambled to my feet, clambered back through the jagged hole, and picked up my coat alongside the lead. The Swede stood under the flood lights and watched me walk out of the yards, not opening his mouth.

I decided it would be easier for him to explain things by my walking off the job. I had little to lose. There were plenty more places to go.

Remember the Old Pay Car?

By "HAYWIRE MAC"

THIS is addressed to old-timers of the rail. I mean those of you who date back to the era when the link-and-pin was still in use, mostly on old outfit cars and work-train flats; when automatic air-brakes were an innovation, when the engine had just shed her picturesque diamond-stack, when block signals were controlled manually by sleepy operators, and when tracks were built of sixty-pound steel, ballasted with mud and gravel.

In those days, you remember, bank checks were used only by higher financial circles, and the roads paid us off in real money—gold and silver that didn't need to be backed by anything more tangible than its own intrinsic value. Stuff that looked like money, had a comforting weight in your pocket and felt like money. As a brakeman—if you were a brakeman, as I was—you didn't get much of it and what you got didn't last long; but you had some respect for your pay, because it didn't look like cigar coupons.

And when you were given that money it came out of a pay car—a vehicle especially built and equipped to pass out wages, and used for no other purpose. In between your paydays the old money-wagon retired to some remote and unknown region like the Big Rock Candy Mountain, there to remain until the tenth of the month rolled 'round again. As a matter of fact, the pay car was forever on the go, showering its nuggets at one town after another until it reached the end of the division and then, with no rest except perhaps on a Sunday, starting all over again.

Come back with me to the olden days lighted by the glamor of vanished youth and let's meet the pay car as we did when we were just dirty-eared shacks. As we hit RA tower, the op is holding the board. Four short blasts from our whistle and the board drops to *clear*, while the brass-pounder in eye-shade and black calico sleeve-guards comes galloping out the door with a "19" order which you deftly spear from the gangway. You hand it to the engineer and you watch the crummy to make sure the rear guards get their copy. Receiving the highball, you turn around and gander over the hogger's shoulder. On the green tissue it says, in looping telegrapher's script:

"Extra seven thirty-four (734) east will take siding and meet extra fifty-one (51) west at Mill Creek," to which the operator has thoughtfully appended: "Don't spend it all in one place." For 51 is the little old brass-bound kettle whose only chore is to haul the pay car.

The pay car—hot diggity dog! Last payday seems lost in the dim mist of antiquity, and next payday seems as far away as Christmas; but Mill Creek is only seven miles away, and when you get there you'll be a rich man.

The tallowpot, with a sooty grin, goes into an elaborate pantomime illustrating how a thirsty railroader unloads a foaming beaker of lager. You loll on the seatbox and regard with pity a farmer driving a mowing-machine 'round and 'round a hay field. What has he got to live for, with nothing but a bunch of livestock and a hundred twenty acres of land? Why, you are a railroad man with a pair of corduroy pants and a gold watch, and you have a meet with the pay car at Mill Creek.

You open the gate at the west end of the long passing track. Then you mount the second car behind the engine to watch the drag as it snakes in over the switch. The hind shack flips the gate shut and waves his hand as he sprints for the rear platform. You pass the signal to the engineer. After that you swing down to the stirrup of the car, for you can see an engine coupled to a lone coach standing near the coal chute. You drop off as the train pulls up and leave the hogger to make his own stop.

Ordinarily the old buzzard would have been squealing for brakes like a stuck pig, but this day you'll set no binders for him to drag up to the chute. He has two air-brakes next the engine and he can either stop 'em or let 'em roll out the lower end of the siding. And the old rapscallion makes a regular passenger stop without a whimper.

Well, there is old 51 and there is the pay car. The engine is a little old 4-4-0 with a shiny Russia iron jacket encircled by wide brass bands. Her big oil-burning headlight is mounted on ornamental brass brackets and has a landscape painted on the side. Her bell, her bell yoke, her sand-box cover and the top of her steam dome are all of brass and so highly polished that it looks like gold in the sunlight. Her side-rods gleam like nickel plate, her cylinder head covers are brass with an ornamental acorn in the center, and her drivers are painted red. And the cab is dark green, with the engine number in gold leaf on a scarlet panel beneath the cab window.

The fireman is out on the running board rubbing a few specks off the shining jacket, but the engineer lolls at ease with one hand draped negligently over the cushioned window sill so that the world

can observe the kid gloves on his ham-like hands. His cap is new. His overalls are clean and starched, with the jumper open in front to reveal a glossy finished stiff-bosomed shirt with a "lay down" collar and a black string tie. His weather-beaten countenance is shaved to the raw, except for a flowing gray mustache of the walrus type with a coal-black Wheeling stogie jutting from under one side.

The pay car is full. A bunch of laborers from the coal chute are standing in line, cap in hand, waiting their turn with an expression of almost human intelligence struggling upward through strata of grime and whiskers. After thirty days of humping over a scoop shovel they are now going to receive money. And they will have it just long enough to get to the post office and buy a foreign money order, for about eighty per cent of their earnings will be shipped over to the old country.

The waiting group are joined by the day and night men from the pump-house. Also by twenty-five or thirty stocky, swarthy Italians with mustaches like brigands and gold rings in their ears. These belong to an extra gang reballasting the main line. Tonight there will be kegs of beer and roaring choruses of lusty song and heavy brogans stomping to accordion music in the outfit cars on the spur back of the pump-house. The good old pay-day jamboree with a Calabrian accent!

Take a look now at the pay car itself in all the glory of its piano-rubbed finish that is the pride of the division paint shop. The striping and lettering are in gold leaf, the windows are of crystal, and the railing around the rear platform with its curlicues and ornaments looks like solid gold. And, if you want to see a real old-time railroader get a load of Mike Flynn the flagman as he stands in the rear with the tightly rolled red banner in his kid-gloved hand.

Mike's name has stood at the head of the brakemen's seniority list ever since he refused promotion fifteen years ago. His cut-away coat and vest are of fine black cloth, trimmed all around the edges with wide black braid. The pants are of ledger ruled fabric about a quarter of an inch thick, fitting snugly around the waist and thigh, then spreading gracefully to a sixteen-inch "spring" at the bottom. Those britches set Mike back fourteen bucks and are worn only when he goes to church or when he flags the pay car. His shirt bosom is crossed by "candy stripes," while his massive gold watch chain supports a huge B. of R. T. charm in gold and enamel. No traveling brother ever had trouble in finding out whether Mike is "lined up" or not.

Yes, sir, you'd never mistake Mike Flynn for a business man, a bartender, or a baseball player. You could tell he was a railroad man a mile away and he was proud of it.

But here is the rest of our crew. We file into the old money-wagon, taking precedence over the laborers because we are on a train and supposed to be going somewhere, while those guys have got all day anyhow.

The interior is finished in some rich-looking dark red wood like they build bar tops with. A sort of counter runs across about ten feet inside the door. At one side sits the Paymaster's Clerk with the mammoth payroll ledger spread before him. In the center, surrounded by trays of gold and silver, is the awesome figure of the Paymaster himself!

The Paymaster's hair and close-clipped mustache are gray, while the eyes behind his gold-rimmed glasses are keen. You mumble your name to the clerk and scrawl your name in the big book with the pen he hands you. In a droning voice he calls, "William Spencer, brakeman, fifty-eight dollars, fifty." On the same note the Paymaster picks it up, "Fifty-eight dollars, fifty." Long white hands move expertly and slide a little pile of coins across the counter. It sure don't make much of a dent in the Paymaster's stock. Golly, he has money enough in there to pay off hundreds, maybe thousands of brakemen.

Sort of a trough has been worn into the

solid mahogany counter about a half-inch deep from the attrition of the tons and tons of coin that have been shoved across into grimy, calloused hands over a period of years. As you turn away your eye is caught by the business-like blue revolver that lies by the Paymaster's elbow, while a gun stock peeps coyly from under the counter and you become aware of four or five tough-looking individuals with significant bulges under their coat-tails. Gosh, the ol' Company sure takes good care of the mutual bankroll, doesn't it?

Outside, in the sunshine with an unaccustomed but very satisfying weight in your right hip pocket, you take another look at the spic and span little train. There is a kitchen in the front end of the car. A plump, jolly-looking Negro in spotless white is stirring something on the stove that smells mighty appetizing. The pay-car crew eat and sleep aboard while on the road, and you wonder if you would be able to sleep with all that wealth piled around you.

Before your fireman has finished taking coal and water, the paying of all company employees at Mill Creek is finished and the pay car is speeding west, just a gleam of varnish and shining metal under a faint plume of smoke. You swagger into the beanery and buy a nickel cigar with a red-and-gold band. When your drag pulls out, you mount a boxcar halfway back along the train and you sit on a big old B&O brakewheel to enjoy your smoke and the scenery.

You begin to understand why fellows like Mike Flynn have a fierce pride in their calling. That same pride is stirring even now beneath your own vest buttons. By golly, it takes a *man* to be a railroader! Railroading, you decide, is a dam' good job.

Train Orders for a Handcar

SHORTLY before the turn of the century, when I was station agent and telegraph operator at Athens, La., a tiny village on the 99-mile Louisiana & North West Railroad, I had occasion to handle a most unusual train order. It authorized a handcar to run with the dignity and status of a special passenger train. And this is how it came about.

Bill Tarbutton, 21-year-old son of the section boss at Athens, was taken violently ill. The local physician, Dr. Stone, lacked equipment to operate on such a case; and an operation was needed at the earliest possible moment. The only way of saving the patient's life, according to Dr. Stone, was to rush him to the doctor at Homer, twelve miles away; but the question was, how to get him there quickly. No automobiles were available in those days, and the wagon roads were almost impassable, knee-deep in mud. The next train was not due for seven hours.

The only possibility, it seemed, was to use a handcar; but there were two southbound trains to be reckoned with, a passenger and a freight, creating a constant danger so the handcar could not make speed. Chances of getting the sufferer to an operating table were decidedly slim. I telegraphed the dispatcher, Mr. Skinner, explaining the desperate situation in a few words. He replied: "Wait a minute, Beach; I'll see the major," referring to Maj. John D. Beardsley, General Manager and sole owner of the road.

I felt sure that Beardsley would say yes to the handcar proposal. Old Man Tarbutton thought so, too, and got his section gang busy. They placed the car on the main line in front of the depot, nailed two heavy planks over it so that the forward ends overlapped the front end of the car by about three feet, and across these planks they fastened a narrow bed.

While this was being done, the dispatcher called NA (Athens) and, without waiting for me to answer, for he knew I would be listening, he snapped out: "To NA, get them ready." And immediately called Homer. "To H," he said, "copy 5; to NA, copy 3;" and gave this order: "Order No. 10. To H, to C&E No. 1 and Extra south, eng. 6. To NA, to Special north, a handcar. Section Foreman Tarbutton will run his handcar with sick man as a special train Athens to Homer with rights over all trains.—CHB."

Tarbutton's "gandy dancers" must have worked that handcar at express-train speed, for they reached Homer in time to save the young man's life. Incidentally, train No. 1, carrying United States mail, had to cool her heels on a siding for a full fifteen minutes while the handcar raced down the main on its errand of mercy.—Samuel W. Beach, 615 8th Ave., San Diego, Calif.

Railfan Excursions

Out of Chicago

THE Chicago Chapter of the Railway & Locomotive & Historical Society, with cooperation of Railroad Magazine, is planning two long western tours out of Chicago. One, leaving July 16 and returning July 30, will be similar to last year's trip: Chicago to Twin Cities to Spokane via Milwaukee Road, to Portland via SP&S, to San Francisco via SP, to Salt Lake City and Denver via WP and D&RGW, to Omaha and Chicago. The other will leave Chicago on August 6 via Milwaukee to Kansas City, then to Colorado Springs and San Francisco via D&RGW and WP, down to Los Angeles via SP, and back to Chicago via AT&SF. Costs will approximate those of last year: including all meals except those in hotels, from about $125 for coach accommodations to $225 for lower berth.

The Chicago Chapter also is planning a tour to New York City, from August 20 to September 2 inclusive: Chicago to Dearborn via MC, to Detroit, Collinwood shops of NYC, to Rochester, and Harmon and New York; 3½ days at Fair; return via Baltimore (inspection of B&O Mt. Clare shops), Norfolk, then C&O to Cincinnati, and Big Four to Chicago. All travel in coaches, with nights in hotels; approximate cost $115. More details in future issue or from D. W. Yungmeyer, 5116 Dorchester Ave., Chicago, Ill.

Out of San Francisco

The eight-day excursion to be sponsored by the California-Nevada Railroad Historical Society has been set tentatively for Saturday, June 17, 1939, leaving San Francisco and Oakland via SP special at 7 p.m., and traversing, the next day, the original CP route at Salt Lake. Arrive Monday morning at Salida, whence a special trip will be made on the narrow-gage *Shavano* to Gunnison, with return to Salida and the Royal Gorge in the afternoon. Tuesday morning in Colorado Springs, with ride on the Midland Terminal and Manitou & Pikes Peak; to Denver late Tuesday night. All day Wednesday in and around Denver, leaving Thursday morning over the Moffat Tunnel route, with stopover at Grand Junction. On the way home, visits will be made to the Uintah, remains of the E-N, the Nevada Northern, Deep Creek, etc. Arrive home Sunday night.

Out of St. Louis, April 16

The St. Louis Railway Enthusiasts are running a trip over the B&O-Alton to Springfield (state capital and Lincoln Memorial) and to shops and roundhouse at Bloomington, Ill. Information from James Bowie, Jr., 3425 Hartford St., St. Louis, Mo. Enclose reply stamps.

Out of Buffalo, May 14 or 21

The Buffalo Division of the Railroad Enthusiasts is repeating the 1938 trip to the NYC's shops at Collinwood; leaving about 7.30 a.m., returning late in the evening. Fare about $3.50. Roy M. Zimmerman, 59 Elmer Ave., Buffalo, N. Y., is chairman of the Program Committee.

Out of Philadelphia, March 5

The Philadelphia Chapter of the National Railway Historical Society and the Philadelphia Model RR Club are joining in a circle tour of Philadelphia: leave Broad St. Station at 10 a.m., to Zoo Tower, over High Line to Arsenal Tower, across Gray's Ferry Bridge, to South Philadelphia enginehouse, to Arsenal Tower via Washington Ave., to Fernwood; return to Broad St. Station at 2 p.m. Tickets $1.50 each, from Harold Geissel, Paoli, Pa., or Robt. G. Lewis, 359 E. Gowen Ave., Philadelphia.

The Fan Organizations

The Milwaukee Road has issued its *Everyman's Almanac* for 1939, and has a few copies left. One will be sent free, as long as the supply lasts to any reader writing the Milwaukee Road News Bureau, Union Station, Chicago, Ill.

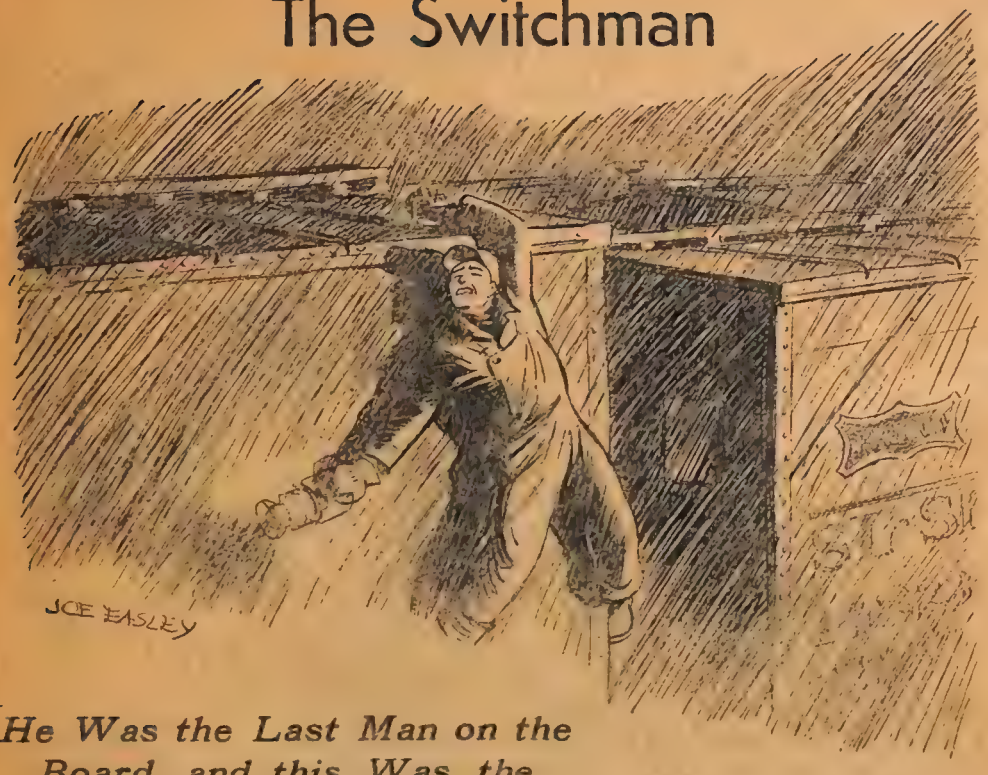
The Milwaukee Road Camera Club, composed of employes of the railroad residing in the Chicago area, meets on the second Tuesday of each month in the club room in the Chicago Union Station. Roy G. Bundy of the railroad's Tax department is president and Miss Mary Bulman of the Dining Car department is secretary. Plans for 1939 include the establishment of a railroad photographic library, which will consist of unmounted 8 x 10 and 5 x 7 glossy prints with complete identifying data depicting operations of the railroad and the varied activities of its employes at work, in addition to scenic views. Correspondence is invited with those whose hobby is railroad photography. Address communications to Room 360, Chicago Union Station, Chicago, Illinois.

Note: Please send all news and photos of railfan activities at the earliest possible moment, so we can get this material before it is too stale for publication.

G. E. Harker, President, Indianapolis Railfans, 1215 S. High School Rd., Indianapolis

Last October 9 the Indianapolis Rail Fans Made an Excursion over the Tiny Ferdinand Railroad, Which Operates between Huntingburg and Ferdinand, Ind., 7.4 Miles. The Train, Consisting of One Car, Was Hauled by 4-4-0 Type No. 3, All Dolled up for the Occasion

The Switchman



He Was the Last Man on the Board, and this Was the First Time He Was Called

IN THE background, where the light was dimmest, young Hughie Lynn had an ear out to catch the muttered comments and queries of the switchmen. Their broken remarks drifted through the dusky yard office like echoes in a cave as they went over the work that lay ahead of them on the drenched sidings. Hughie snatched any of the talk that got to him. The room seemed to vibrate with the compact power of hard, flexible bodies as the men lined up the night's operations. That potency flowed through him on the tight wires of his nerves. The gaunt space inside of him didn't bother for the moment.

The yard office stove was booming. Crews, just in from hours on the stormy switches, steamed around its red belly. The night men hung in clusters to the counter—"pinmen" and "fielders" checking the switch lists with their engine foremen under the dull light globes.

A gray foreman grumbled, "We won't get them six loads over from the Consolidated to catch Eighty-nine tonight." He was on an outside engine, doing chores. He stuffed lists into his pocket.

That started the empty crawl inside Hughie Lynn again, as he realized it was time for his tryout.

"Which is Van Ardle?" he asked a

By HARRY BEDWELL

big switchman leaning on a counter.

"That's him talking to the night yardmaster," the man glanced and nodded. "You called to work the field for him tonight?" he asked. "New here, ain't you?"

"The last man on the board," Hughie acknowledged, "and the first time called."

"That really puts you up against it," the switchman assured him with relish. "Van Ardle is a rawhider and Lou Stecker, his pinman, is a louse. Mebby you'll last the night out with 'em. But not likely longer."

"I'll get by," Hughie said, but his stomach was frigid.

"They're tough!" The switchman savored some malice. "They say they kicked a cut of cars over the edge of a mountain in the Butte yard, and the fielder was on top at the time. They get sore easy and tear things up. I worked with 'em one night. But not any more."

The gray foreman eased in. "They get tough with young punks pretty quick," he considered. "When them two switch, they haul 'em around brisk."

"Yeah?" scoffed the switchman. "But what does it get them?"

"A job wherever they want it," the foreman declared. "They're as good as ever pulled a pin or a drawbar, and you've got to step to keep up with them. Punks don't."

"Listen," the switchman confided to

Hughie. "They're dynamite. A pair of hard boomers. Don't let 'em rush you. Stall. To hell with their rawhiding."

That switchman hadn't been around. He was a local, a home guard who stuck to one job in the same place. He didn't like that arrogant breed of boomers, but he envied them. The drifters didn't trouble to conceal their contempt for these rustics.

THE night yardmaster's eye flitted down the counter and speared Hughie like a lance. He said something to the two men beside him, and the three looked at Hughie like horse buyers judging a dubious animal.

The broad, deliberate one said, "Hey, barrel stave!" and beckoned with a jerk of his head.

The switchman beside Hughie exploded in snickers. "Barrel stave!" he whooped and slapped the counter.

Hughie's face blasted red as he wheeled on the man. You had to stop their ribbing you before it got to be a habit.

The broad switchman's voice dropped lazily into the sudden quiet. "Was there something funny about that, Sam?" he inquired.

Quiet and polite. But Sam folded his grinning lips tight, and his sunburned face went dusky. He didn't reply. Hughie hooked his lantern in the crook of his arm. Under the broad man's ironic eye he tried to walk with the easy switchman's stride.

The night yardmaster introduced them. "Lynn, this is Van Ardle and Lou Stecker. The quickest way to find out if you are a switchman or not is to see if you can handle the field for them."

Van Ardle said quietly: "You've got hips like a snake, kid."

You could take that a couple of ways. Hughie was lean at the hips. Also, switchmen were called "snakes," not disparagingly but because the design of their order's emblem looked a little like one. Van might be grading to either standard.

Stecker, the pinman, was long and light on his feet. He was bent just a degree at the middle in a slight crouch from which he could flow into quick action. A hardy pair that a kid switchman who hadn't learn his trade would have a hard time getting by with.

The night yardmaster said to Van Ardle: "Got it lined up? Grab those loads off the SW transfer first. Then make up the two locals in time so you can help break up the time-freight as soon as she shows. She's due around two o'clock, but'll likely be late on account of the storm. We'll work the hotshot from both ends so as to get the perishable over to the transfers for the morning runs. Think you can make it?"

"We'll make 'em fit," Van Ardle said.

He buttoned his sheepskin coat, took his lantern and wandered out deliberately. The wind spat thin rain in gusts. The yard lights goggled like tear-misted eyes. The sharp scent of coal smoke swirled through the wet air. Yard engines coughed and boomed, their bells tolling like a funeral. Loose cars grumbled over dripping rails.

You couldn't make kid dreams come true from a cracker-box by the grocery store fire. And you couldn't sneak into this game. They nailed you for a swindle quick. He knew it was going to be bad working a yard he didn't know, the visibility low, the going insecure and two tough boomers to get along with. Specially with a chasm in your middle and holes in your legs.

"I lied to the general yardmaster

about the experience I've had," Hughie said. The gusty wind made him choke.

"Yardmasters," Van Ardle mused, "are born to be lied to. That is how come they find out mis-statements so fast."

"I'm telling you so you can turn me in now, if you think I'll get you in a jam."

"We don't jam that easy," Van Ardle grunted. "How much railroading have you got on your record?"

"I had four months braking off the extra board," Hughie gave it. "But I wanted to be a switchman, and I thought I was good enough. I got in four weeks in the Birmingham yard before they found out I wasn't. I didn't figure that one till they only let me stick ten days in the St. Joe yard."

"Maybe you spoke out of turn sometimes," Van Ardle suggested. "Kids do."

"I didn't always wait till I was spoken to," Hughie admitted. "But that's out of my system." It was hard to start your lessons all over again when you thought you already knew the book.

"It's a tough game," Van quoted sadly.

"I like it—if I could get going."

"Oh, well," Van sighed. "Watch sharp for the signals, catch the cars as they come to you, and don't split any switches. It's a swell night to make mistakes."

IT WAS, but Hughie believed he might avoid some of them now. During his recent time of unemployment he'd thought out his past errors. Missing meals had stimulated his reasoning.

They crawled under the storm curtains of their yard engine. Van muttered an order to the engineer. The headlight stabbed the rain, air sizzled and the engine moved off, clanging. Red and green switch-lights nodded wayward greeting from the gusty dark. Fine smells of hot oil and live steam flowed through the cab. The fireman scattered coal upon his fire. Hughie's nerves hummed like thin, tight wires in the wind.

They rolled up to an obscure switch and dipped into a dark siding. They tied onto thirteen cars and dragged them forth and moved back across the yard. They shoved four loads into the house track beside the freight platform.

The three climbed into the cab again, and they clanged away through empty, rain-swept darkness to an isolated clump of switch lights.

Stecker said: "I'll throw this switch. The kid'd not know the right one." He slid under the storm curtains into the cold rain as the yard engine slowed.

Van and Hughie got down as the drivers squawled under the pinch of air.

"Cut them off at the engine and ride them down to the other end of the siding," Van ordered as Stecker's lantern signaled a back-up from the rear.

The string moved back toward the red switch light and the beckoning lantern. Hughie had his hand on the coupling lever as he walked at the opening between the tender and the head car. The exhaust flared briskly and the speed picked up. He jogged on the unseen packed cinders, the rain driving in his face. In a strange yard you couldn't know the footing at night, or what lay ahead. Pools of water smacked under his running feet.

He was conscious suddenly that Van Ardle was striding at his side and his lantern was whipping a signal to the engineer. The string jerked to a stand.

Van was making pungent remarks that hit like buckshot.

"Didn't anybody ever tell you to stand on the footboard to uncouple a car from the engine while in motion?"

"No, sir," said Hughie, bewildered.

"A fine job they did breaking you in," Van stated bitterly. "Look!" He swung his lantern low. "That footboard sticks out far enough to catch your heel and throw you down and maybe under the wheels if you're running with your back to it. As long as you are switching with me, you cut them from the footboard. Get it?"

"Yes, sir!" said Hughie. Rain drops sizzled on his burning face.

"Try it again!" Van snapped.

His lantern swung and the impatient engineer spun the drivers in a hard burst of power. The string slammed out the slack and glided swiftly through the dark.

The dim wedge of the hindlight on the tender flowed along the cars and plunged into a vast black wall that it couldn't penetrate. It looked as if they were shoving the string over the edge of an abyss. Hughie stepped onto the footboard, but he bent sidewise and stared at that black pit they were heading into.

The cars at the other end dropped hazardously on an abrupt incline. The black hole into which they rolled was below and beyond the misty stab of the hindlight. There couldn't be a bottom down there near enough to catch that string without wrecking it. Those nine cars loose on that slant would at once develop a speed he'd never be able to check before they crashed. These two, they said, had shoved a cut of cars over the edge of a mountain up in Butte, with the fielder on top.

"Cut them loose!" Van ordered, and swiped a signal to the engineer.

Hughie's hand was clamped on the coupling lever, but he couldn't raise it. He wasn't able to turn those cars loose and ride them to destruction. The engine checked sharply. The slack ran out with a savage yank and roar.

VAN ARDLE'S lantern winked beside him again, and his words came in an ominous bark.

"What's the matter? Lever stuck?"

"No, but there's a hole down there—"

"Cut them loose and ride them down!" Van's peremptory lantern started the engine backing again.

Wet wind crawled under Hughie's collar and drained down his back.

"Now!" barked the foreman as the engineer gave the string a kick.

Hughie barely raised the coupling lever in time as air sneezed and the engine stopped. He snatched the iron rungs at the side of the head car as it leaped away. The string lifted into howling speed and glided down the dark incline as he scrambled to the top. The hind light faded out. Away ahead a wet green spot marked the switch stand at the other end of the siding. The cars swooped as if they were on a roller coaster.

He slipped on the slimy running boards, and staggered forward over the rolling top and snatched the first brake-wheel. He twisted it furiously and put his weight into a swing to get that last notch that would hold more than the previous three. Brakeshoes took hold and grunted.

The green dot ahead swam in the mist like a racing meteor. When they met it they'd smash through something, or else leap out into empty space. He wrenched at the second brake, and the car bounced under the grip. Fine rain drilled into his face

and half blinded him. Car wheels screamed on wet rails.

But you couldn't check them with brakes on that slant. They were falling. Van Ardle, who got sore easy, was going to be rid of him at once. He'd know his fielder couldn't hold this string on greasy rails and that grade. The green splash at the other end of the siding was streaking at his head. The cars bucked and roared.

Then the momentum died like a flame at the end of the wick. It was a breathless shock the way their fall eased. The string nosed up and was scrambling out of that black hole, brakes and a sudden up-grade set against it. The speed choked and expired. The green light stood off at a considerable distance and leered.

He couldn't get his breath fast enough as he ran back to let off the brakes he'd been too quick to set. The up-grade was as stiff as the one coming down. He reset them at the first backward surge, but they hadn't made the end of the siding where Van had told him to spot the cars. Young switchmen scared too easy, especially when the next meal was dubious. He went over the side in profound mortification.

Stecker met him at the footboard.

"Listen, kid," he said. "When Van tells you to do anything, do it now."

"I will, from here out," Hughie promised. "But that hole looked to me like it didn't stop this side of China."

He missed Stecker's grin in the dark.

They rolled across the yard and pulled some empty stock cars out of a spur. They began to make up two branch locals.

"We'll be piling them in," Van warned grimly as they shoved the cut into an empty siding.

HUGHIE swung to the top and the cars slid into the gusty dark. He peered ahead at the flock of red and green lights goggling in the rain. He couldn't guess which one he was aiming at, and he had better not check till he was sure. He rubbed the rain from his eyes, and then a switch light dodged into his path almost beneath him. He wrenched a brake-wheel with muscle and weight. If he split a switch after all his other errors, he'd not be permitted even to finish the night's work. The cars ground to a stop, but he had crowded a little the end of the siding.

A dull mumble came with the wind, and the vague bulk of another cut loomed down the parallel siding. He went over the side and sprinted back to meet it. He slipped on the wet rung in his lunge to the top, and bumped his chin and banged his lantern. He tied them down alongside the first cut.

The yard engine raged about, snatching cars from here and there, casting them at him with an accuracy that brought them to a gentle coupling with the two growing strings. They came in ceaseless streams that kept him jogging back and forth across the sidings to set the drawhead knuckles and to see that they locked together. He tried not to miss a coupling so the engine wouldn't have to come back and tighten them up. The cars floated to him like ships in a fog.

His boots were wet and heavy. The drive ebbed from his hollow legs, and the empty crawl began to gnaw his stomach. It was past time for the midnight lunch, but the cars continued their steady drift down the sidings. Anyhow, there would be no lunch for him, but he would like a little rest and some drying out while the others took theirs. He would like to be more alert

and efficient. If he did a good job for the rest of the night, they might overlook his initial errors and try him out longer.

Back home, from the high bank above the railroad yard, he had learned to read the switchmen's signals before he knew his second reader. Smell of engine smoke made bright pictures in his mind. But it took more than hankering to make your fancies work.

The engine came down to him, and Stecker signaled him to get aboard. He huddled against the boilerhead as they rolled across the yard. They dipped into a siding and pulled out six cars that were on top of the four they wanted. They made a drop of them, and Hughie set the brakes as they moved into the clear. He slid quickly over the side to reach the ground in time to catch the engine as it ran back in.

Maybe doing without food cleared your thoughts, but it took the spring out of your knees. The iron rung on top was crosswise of the corner instead of parallel with the side. When it was so set, there had always been a ladder down both the end and the side. He went over the edge in a turning skid. His foot was rigid to catch the ladder below, but his toe scraped the side of the car without obstruction.

In the second before he reached arm's length he knew there were no steps down the side. There was a ladder at the end of the car only. His left hand was caught under the top rung, and in the instant he realized there was no ladder below him, he set his grip and crooked his arm to ease the force of fall at the elbow.

The wrench, as his weight came down on his arm extended across the roof, nearly parted it at the shoulder. His hand, caught under the rung on top, was shot full of hot needle points. Pain ran through his rigid arm and dribbled down his side. It forced him to swing over with his back to the side of the car, and any move he made thereafter tore his forearm on the edge of the roof. He braced his heel and tried to twist his body toward the corner, but he couldn't turn an inch on that cutting axel.

The yard engine rolled toward him down a parallel siding through rain and smoke. If he didn't hold till it passed, he would drop and sprawl in its path. The edge of the roof bit into his forearm, and his wet mitten began to slip through the deceptive rung. He couldn't quite raise the courage to hold on against the pain. His eyes stung and fogged, and the things they could see flickered in watery lines.

A SPARK of light streaked somewhere below. It came up the ladder at the end like a scared comet. It flowed in swift flight without effort or interruption. It swung over the top above his head.

Someone came down on the roof. A hand dipped into Hughie's collar and the sawing strain was released from his arm. He was flipped over the edge as easily as a fish sprung from a pool by a stiff rod. He lay still while the numbness died and the pain spread through him.

"Don't ever try to get down off boxcars without steps," Stecker's sarcastic voice drifted to him on the gusty wind. He swung his lantern in Hughie's face. "Break anything about you?"

"No. I'll be all right when the circulation gets going."

"Don't ever guess where you're going to step," Stecker snarled. "Look first."

"It slows you up," said Hughie.

"You heard me!" the pinman yelled.

These two got sore easy. They had been too much afflicted with counterfeit switchmen. After this last stumble they wouldn't bother with him longer than morning.

They pasted the four cars onto a local, and circled and picked up the cabooses and tied them on.

"I guess that makes them fit," Van Ardle decided.

"Chow," said Stecker.

Van nodded.

"Come on, kid," Stecker invited. "We eat."

"I—" Hughie choked on the wind. "I brought my lunch. It's at the yard office."

"The boss buys grub the first night a new man works this crew," Stecker said. "Let's go."

"The hell I do!" Van challenged.

"An old switchman's custom," Stecker insisted, and flicked his lantern at the foreman.

Van said, "Oh." Then added: "But I don't buy you no half of a cow."

"On the spot,"* Stecker called to the engineer, and shouldered Hughie between them. They slapped across the yard to the union station.

There was something away out of line here, but Hughie couldn't follow it through his numbed mind. He would check it if he ever got warmed up and dried out.

He leaned over the radiator in the station lunchroom and let the heat draw aches from his body.

Van Ardle glanced at the kid, then took a second look. "Coffee," he ordered abruptly. "Big and black!"

The red headed waitress was talking to a passenger brakeman down the counter. She spoke rapidly into his upturned face. The brakeman's brass gleamed and his blue uniform was pressed in sharp edges. They paid no heed to the bedraggled switchman.

Van said: "Coffee, please."

"Just a minute," the brakeman barked.

Hughie didn't see Van move, but the foreman suddenly stood beside the brakeman. Stecker slid off the edge of his stool.

"Speak when you're spoken to, barber," Van warned. He looked at the girl. "Three cups of coffee—please," he repeated.

The brakeman whirled his stool about.

Van purred: "Stay on your perch, polly, else you'll lose some of those brass buttons."

The brakeman looked down at his gleaming uniform and back at the switchman.

"All right, snake," he agreed harshly. "Mebby next time you will have on your good suit. I'd be glad to muss it up for you."

"I'd be tickled to have you try," Van nodded, his bushy eyebrows contracting.

That is how switchmen and trainmen sometimes agree. Leisurely, Stecker got back on his stool.

The hot coffee went directly to Hughie's hollow legs. The steak, when it finally came, was thick, but it could have covered a wider area.

"Hey!" Stecker's protest plunged through to him. "What's the hurry? The longer we eat, the more 'spot' we get."

That coffee had a wallop. His senses began to take hold again.

"If that's all there is," Stecker complained at last, "I'll try to make it last me till morning."

*"On the spot" means enjoying a rest period, whether eating, sleeping, loafing, or just gabbing. The last-named meaning is used for the title of the "Spot" department in this magazine.

GUSTY sleet, like spent bird shot, scratched Hughie's face. The cold made his wrenched arm ache. But he could bend his knees again and lift his feet.

"There's the hotshot pulling into the yard now," Van said, squinting through the swirl. They climbed into the cab and the yard engine clanged down the siding.

The long time-freight dragged to a stop. The head brakeman cut off the engine and took it away to the roundhouse. An inspector went down the line of cars looking for bad orders. A checker was tagging them with colored cards. Van followed him and then came back.

"We'll be shoving cars into four different sidings," he told Hughie. He indicated the switches from the lead. "We haven't much time. You'll have to keep moving."

Another yard engine began working at the rear end of the time-freight.

Van and Stecker teamed like two fine gears meshing smoothly. The two engines worked furiously, crowding each other on the lead, scuttling out of each other's way. The wind steadied and drove the sleet in slanting volleys. Four sidings to cover, and the slippery footing, began to wear Hughie's legs down again. Van was dexterous with cars. He could figure instantly the quickest way to distribute them. He kept them rolling down the sidings.

The other engine shoved a car onto a string that had built up almost to the switch, and Hughie coupled it on. Van was coming up the lead with a cut, and the other engine slid into a siding to go around to the rear of the time-freight. A lone road engine came down the lead in Van's face.

"Somebody will have to move over," Hughie decided.

Van checked his engine with a flick of the lantern, dropped off the footboard and walked forward, waving the road engine down. Stecker was hanging to the rear of the cut.

The road engine stopped with a grunt of brakes, and the brakeman in charge of it walked forward into the flare of headlights. It was the same one they had encountered in the lunch room. Hughie stopped leaning on the drawhead.

"Get back in the clear and let me through," the brakeman ordered.

Van shook his head. "Back into that siding," he replied resonably, "till I distribute this cut. Then I'll let you through."

"This is a passenger train's engine," the brakeman said sharply, "and we've got a schedule to make."

It was a fine point of operating rules. Which should hold up the other: a first-class passenger train's engine headed out to take her run, or a yard goat lining up perishable freight to catch early morning schedules? Hughie waited for the decision.

"Back up!" said Van Ardle briefly.

"You'd better get that goat out of the way," the brakeman warned. "It'll go bad with a yard crew that lays out a passenger train."

They couldn't tie each other up for the rest of the night to argue the point. The Old Man would take both scalps if they did.

Van walked past the brakeman and along the right side of the road engine.

"Hey!" he called up to the engineer. "Tell this shack of yours to get you in the clear till I slip these cars in where they belong."

The engineer leaned a little from his cab into the sleet. "Get in the clear yourself," he said. "I've got a passenger to pull, and we leave on time."

That was a hoghead sticking up for his rights. Hughie wondered anxiously if they didn't have Van stopped.

"Okay, hogger," Van nodded. "If you won't move, I'll do it for you."

THE other yard engine was moving away. Van waved her down and brought her back to him. He conferred briefly with the foreman. Then the engine moved through the switch again and out onto the lead at the rear of the road engine.

Van snapped at Hughie: "Cut off your engine and bring it up here!"

Hughie jumped. He ran back and uncoupled his engine from the cut of cars and brought it to the pilot of the the road engine. This was going to be something the rule book didn't tell you about.

"Couple onto him!" Van directed.

Hughie signaled and his engineer inched forward to a coupling. The two locomotives glared into each other's eyes. The second yard engine was coupling onto the rear end.

"All right," said Van grimly. "Now shove him back!"

The exhausts of the two yard engines stamped resolutely. The engineer of the road engine shoved the air brake valve handle over to emergency. Couplings grumbled. Van's lantern signaled impatiently, and the two yard goats went for the road engine like barking terriers. The stacks blew off in ripping explosions and blasted streams of sparks into the driving sleet. The road engine groaned under the powerful thrusts of the push and pull and her drivers howled as they slid.

The engineer hung half of his length from the cab. He bellowed: "If you flatten my drivers, you know what the Old Man'll do to you."

"Release your air, then," Van Ardle called back.

The brakeman yelled to his engineer, "Shove back at them!"

The runner ducked into his cab. He latched out the throttle an inch at a time. Finally he released the air and pulled the throttle wide.

The three stacks pounded in a tornado of fury and sprayed the wet dark with leaping sparks as they began a battle of power. The two low-wheeled little beasts ground their drivers into the sanded rails and blasted. The high wheels of the road engine slipped and churned. Fire flickered from the rails as she raged like a mad bull. But she couldn't hold against the power of the stubby goats built for pulling. They forced her back steadily.

Something was like to give way under all that pressure, and flattened drivers have to be explicitly explained. At length the road engineer gave up.

"I'll get in the clear, but the Old Man's going to hear about this."

"Cut off your engines and clear him!" Van ordered bruskly.

The brakeman opened the switch and signaled his engineer into the siding. Then he crossed over to Van Ardle. There was a cold crawl down Hughie's spine, and it wasn't the wind. That brakeman's eye was fired with rage.

Sleet whipped across the path of the headlights. The brakeman's long slicker had the sheen of polished black metal. The road engine's bell tolled and then was still. Hughie moved toward the two.

"Twice in the same night is once too many," the brakeman said. "Let's see how many of my brass buttons you can pluck before I down you."

Van looked at him once, then turned toward his engine. "Don't be a damn fool," he advised.

The brakeman took a quick step and swung his lantern backward over his shoulder.

In stride, Hughie dug a toe into the sleet underfoot till he felt the grit of cinders beneath. He lunged.

His wrenched left arm wasn't of any use. He threw his right side under the swinging lantern into the brakeman, and brought his shoulder up under his chin as they came together. The lantern came over in its swift arc and struck Hughie in the small of the back. It bounced and crashed and went out. The brakeman hit him once in the ribs as he whirled away from the collision. Hughie skidded and sprawled.

A SHADOW flitted into the pale light and blended with the reeling figure of the brakeman. Hughie got up carefully. Stecker had the brakeman by a hitch in the collar of the slicker. The brakeman was slowly shaking his buzzing head. Stecker was undecided. He had missed most of the proceedings while protecting the rear end. He had come forward at last with the feeling he was missing some engaging events he should investigate, but he wasn't clear on exactly what had occurred.

"You was going to do what?" he demanded.

"Nothing," Van cut in. "Let him go, Lou."

Stecker let go with reluctance.

"Tie onto your cut and get it into the clear," Van ordered.

Stecker shouldered Hughie along with him. "What was that shack trying to do Van?" he asked savagely.

"I guess I just thought he was going to take a swing at him with his lantern," Hughie apologized. "Maybe I hopped in too quick. I'm a stranger, and I don't know how mad a man is by the way he talks." He turned down a siding.

The drifting cars began to loom again like great beasts against a ghostly sky. The brakeman's blow in his left side had jarred more hurts into being. They all aroused when he had to break into a run. His clothing weighed tons. His skin felt like a cold, wet sheet wrapped tightly about him. He stumbled once over the rails. The sun must be coming up somewhere behind those low clouds.

Cars stopped coming through the sleet. They were done with the time-freight. The night yardmaster stood by the engine talking with Van and Stecker. One of the items discussed would be himself, and he couldn't help drawing near. He knew he hadn't done well at all. Those two tough boomers wouldn't care to have a punk along who never missed a chance to make a mistake. But you couldn't help hoping till you were certain.

The night yardmaster glanced up He motioned for Hughie to follow and turned up the yard toward the office The youngster stumbled twice before he could get his feet to swing accurately. He hadn't made it. The yardmaster was cutting him off and calling him in to give him an order for his time check—one night's work. Hughie eyed the two switchmen, but they didn't look at him as he went by. They were in concerned conversation, he was merely an unfortunate incident in their lives, and they didn't turn even to toss him a hand in farewell.

He hadn't known about the danger of the footboard throwing you, and he'd been scared to ride that cut into the dark hole. Then Stecker had to spear him from the side of the car that he had helplessly hung himself on. Van hadn't liked it that he had intruded

between him and that brakeman. The foreman knew how to handle himself in any yard, and he wouldn't want a switchman who was easy to stampede.

He had grown up with the enchantment of the ceaseless shifting of cars in the big yards. In lazy sunshine and under low stars he had watched the swarming engines unsnarl the long lines and break them up and move them in great blocks through contorted sidings, while lean switchmen, darting with the swift ease of shadows about the heavy, rolling equipment, shuffled them into new columns for the road engines to take away in long trains.

Other kids read their adventures in books, of deadly conflicts and breathless hazards. He had watched perils ventured in routine work. And in the switch shanty where these agile and arrogant men forgathered he had heard of daring maneuvers from the men who had lived them. Lunging horses weren't as fine as rambling cars. The thunder of hoofs wasn't the roar as the slack came out of the long string. But it was a hard game to make your way in. Maybe he would never know the boomer trail that master switchmen take.

THE yard office was stale and lifeless in the gusty dawn. The yardmaster pawed his disorderly desk and a rusty pen screeched out the order on the paymaster for Hughie's time. He slid it across the counter.

Hughie stared at the white slip. He couldn't make it out in that light. Anyhow, the paymaster would translate it for him into his night's pay. It didn't have to be explained. He didn't even care to listen to the obscure remarks the night yardmaster added.

"Van says likely you did something to your arm when you missed the steps on that boxcar," he recited. "Those L & J cars I guess are the only ones that haven't got a ladder down the side when the rung on top is set crosswise. It fools lots of switchmen. You take that order to the company doctor and let him check your arm. You'll have to get a release from him when it's all right for you to come back to work. Telephone this afternoon whether he'll let you come on tonight or not, so we can protect your job. It was a helluva night to have to break in on this yard." His eye sparked with brisk humor. "Van says you hesitated only once about riding them down that dip track. I've seen old-timers refuse it the first time in the dark."

Hughie tried desperately to get a focus on the message the bit of paper bore, but the lettering and the inky scrawls ran together and blurred. An order on the doctor? Then he wasn't being sent to get his time. But his arm wasn't hurt bad enough to see a doctor.

He collided with the door and fumbled his way out. Van and Stecker were coming up the platform. Stecker's voice was raised, and he waved menacing arms. His words tumbled on the wind.

"Yeah, you're so blamed sure about things, Van. But I'm telling you that shack was hostile. The kid was right to stop him first and find out what about it afterward."

Van Ardle grunted. Stecker caught sight of Hughie and grinned. Then:

"That's all for tonight," he said cheerfully. "On the spot, switchman!"

A slow glow ignited under his ribs. Hughie probed anxiously for the cause. The warmth got into his confused brain and his thoughts broke loose in fragments that struck a blinding fact.

On the spot, switchman!

That was his degree! Stecker had given him the salute and the endorsement. If that durable pinman said he was a switchman, it had the authority of a certificate.

"Say, boss," Stecker wheedled. "How's to loan your crew ten bucks apiece till payday. I'm fresh out of eating money, and your fielder ought to be if he ain't. Look, Van. You can't let your crew go hungry."

Van dug under his sheepskin coat and fumbled out a wallet. He passed it to Stecker.

"Look at that roll!" the pinman gloated. "I ought to've asked for more." He held out a bill to Hughie. "We gotta buy our own grub till there's another change in the crew."

Hughie withheld his hand. "I don't eat that much," he grinned. "Thanks, though."

"Take it!" Stecker blared. "Else he won't let me have any."

But Hughie's eyes assured him that Stecker only pretended to take money from the wallet before he handed it back to Van.

"See you tonight," Stecker said as they moved off.

See him tonight! The two drifted in a swirl of sleet. He'd break that doctor's neck if he tried to keep him off work because of a scratched arm. When those two undertook to make a switchman out of a punk kid, he'd better not take any time out.

The sharp sting of coal smoke was in the wind, the slow beat of the exhaust as a locomotive snaked a drag, and the burst from a stack as another kicked cars free. Rolling wheels muttered on dripping rails. Hughie lifted his feet in the swagger of a switchman.

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THE BOOMER RAIL, like the poor Indian, is reaching his last stand out here in the desert of Eastern Nevada.

Thanks to Hitler, Mussolini and the rest of the war dogs of Europe and the Far East, there has been a demand for copper; and Nevada has whole mountains of it. Before it can be reached, however, millions of tons of overburden must be removed to enable power shovels to get to work. So the Consolidated Copper Co. here started a muck rush. Muck trains are going day and night getting down to the ore. They are moving 200 cars of ore a day from the pit and mines at Ruth and Rumbley.

The outfit is located in the mountains, where grades are heavy, so the management decided to use experienced men. About 200 switchmen, firemen and engineers were needed. When word got around that there were rail jobs open here with no physical examination, no personal record required, no examination and practically no age limit, the brothers moved right in.

I have survived the wheat rush in Kansas, the grape rush in California, the oil rush in Texas and the makings rush (sand and gravel) at Boulder Dam; but all combined couldn't beat the muck rush in Nevada. There were more railroad men here at one time than I have ever seen in one place at one time, so help me. And even at that, this place is at the end of a 150-mile branch of the Nevada Ry. Anybody who has a ticket can ride on the Nevada, but nobody can ride in or under a boxcar. Nobody can even walk on the ties and nobody wants to walk 150 miles or even 149½ miles in this kind of country.

As I said, they came. Some lasted a week; many are still here. Rule G got in its devastating work. Bums, not boomers, have fixed things so that an experienced man can hardly light here any more. I have been here two years and consider myself a home guard. I know it is my last chance. We have had no ball-ups, no accidents. The boomer can do his stuff if given a chance. Our outfit is not classed as a railroad yet, but the Wages and Hours Law helped to create employment.

No, there are no more jobs vacant here. Officials are making their own men now. You can guess the reason why.—DENIS SLOAN (BRT 335), Employes' Club, Ruth, Nevada.

OLD-TIMERS on the Wheeling & Lake Erie may recall my father, D. R. Webner, who started as a brass-pounder in '89 and left as trainmaster in 1918. He knows quite a number of the characters who are mentioned from time to time in *The Boomer Trail*, and would like to hear from anyone who remembers him.—R. D. WEBNER, 1524 Northland Ave., Lakewood, O.

* * *

ONE morning a conductor on the Soo Line learned that his way-freight crew was blessed with two brand new student brakemen. He muttered a few wrathful oaths, led the two youngsters out into the yard, and pointed toward a string of boxcars attached to his caboose.

"Shorty," he ordered, "you get inside that caboose and give it a damned good scrubbing." Then, to the other greenhorn:

"You, Slim, couple up the rubber hoses that hang from the ends of those boxcars. And be sure to turn the angle-cocks, those little handles at the top of each hose, lengthwise with the tracks. Start at the caboose and keep coupling until you reach the engine—then tell the hogger they're all coupled."

The pair hastened to obey. Soon "Slim" completed his task, thrust his head into the gangway of the engine and exclaimed: "Turn 'er on, Mr. Engineer!"

"Turn on what?" the hogger growled.

The student's reply came fast. "Turn on the water! Shorty's gonna scrub the caboose."—"BOOMER BARNEY" (THOMAS K. BARNSTUBLE), State College Sta., Fargo, N. D.

* * *

MANY "train alarms" have been invented by boomers of the key and sounder, for lonely hours when trains were few and far between and they could no longer stave off Morpheus. Some of these alarms worked; some didn't.

No train could have sneaked unheralded past the one I perfected—almost, anyway—when I was working on the New Castle Division of the B&O shortly after the World War. I was only fifteen when I hired out, but with plenty of enthusiasm I bluffed the division operator into believing—or pretending to believe—that I was eighteen. He assigned me to third trick

(11 p.m. to 7 a.m.) in a station so lonely and so unimportant that it was abandoned shortly afterward.

Trains never stopped at that place, almost never got orders there, and rarely even went so far as to notice us with a whistle signal. The main job was to report the trains by to the dispatcher, promptly—and to keep awake. The former was easy, the latter wasn't. Under the pressure of necessity, I devised a type of train alarm which, I since learned, has long been used by lightning slingers in remote depots all over the U. S. and Canada. It was, as you have guessed, a length of stout cord tied to a coal-scuttle suspended in midair, the other end being attached to a switch stand on the far side of the track.

Well, it worked—and how! Instead of breaking the cord as I had planned, the train dragged the coal scuttle out of the window, together with some telegraph instruments and a few other things. The clatter woke me all right; but the next time I tried that stunt I used a flimsier grade of string.

A friend of mine used still another form of train alarm. He stuck a car seal between the rail joints in front of the telegraph bay, so that if a train should pass while he was indulging in shut-eye, he could tell it by a glance at the rail. One night he dozed, awaking with a start and noticed the seal was gone. Grabbing the key, he rattled off: "OS, OS, Va; extra 9247 West by ———"

"Sleeping again?" the dispatcher broke in acidly. "Extra 9247 isn't within ten miles of you."

The train in question had pulled a drawbar and was tied up a good half hour away, while a high wind had blown the car seal out of the joint.

Thompson, another friend, experimented with an operator's coal-scuttle alarm one night. The op is climbing fast among the brass hats, so he doesn't sleep on the job now. But in those days he was a telegrapher and a very drowsy one. Walking past his station about 1 a.m., Thompson decided to drop in for a visit. The operator, perched in a chair, was sound asleep. His coal scuttle was suspended in the air by a cord, the other end of which was tied to a rail outside so that when a train cut it the scuttle would drop. Just then Thompson heard a train reported by a nearby station. He seated himself, saying: "I'll stick around and see how it works."

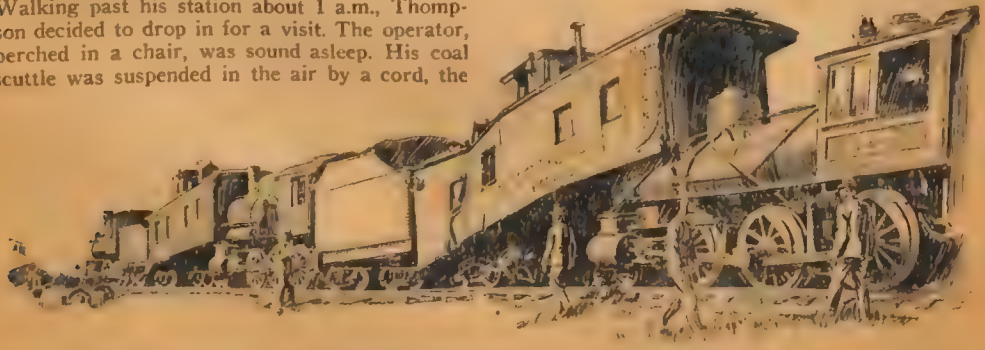
In due time the train, second 64, came. It cut the cord just a second before the operator pitched forward in time to receive the coal scuttle on his head. For a furious moment he struggled to get the darned thing off his head. By that time the train, a short one, was by. Then he heard Thompson say: "You'd better report second 64 by." He turned on the visitor with a threatening gesture. "You son of a biscuit!" he screamed. "You did it—you did it on purpose!"

Thompson fled down the road, still advising, at the top of his lungs, the operator to report the passing of second 64. That op never did forgive him.—George R. Reiss, 124 Robbins Ave., Niles, O.

* * *

THOUGH I was hired as a machinist on the Old South Park Line at Denver in 1893, General Foreman Picola gave me an indeterminate sentence at hard labor firing a narrow-gage engine out of Como, 88 miles west of Denver. Como is 9000 feet above sea level. I had a 65-mile run between there and Leadville. That wasn't so far, but some of the miles in between were stood on end. One hump was Boreas Pass, 11,498 feet high, with snow ahead; then down to Keystone and Dickey, 8,000 feet; then up again to Climax Pass; then down again to Leadville, 10,200.

If we got tired of this scenery we were sometimes allowed to change over to the road between Como and Gunnison through Alpine Tunnel, 2000 feet long at an elevation of 11,596 feet above sea level, then down hill to Gunnison. In winter eight loads made a full train; in summer two more cars were tied on. Once or twice a



Old-Timers from the Nickel Plate Recall This Pile-Up of Dec. 13, 1906, When Three "Lights" Ran into a First Section Taking Water at the Hopkins Tank East of Mentor, Ohio, Killing E. F. Miller. Who Can Supply Further Details? (Drawn from Original Photo in Possession of E. E. Strock; See Railroad Camera Club)

week we went below Gunnison for five to eight cars of coal. That coal was worth going after, for it would burn to a white ash which would blow out if the dampers were opened.

Another variety of coal was 50 per cent snow, 5 per cent slate, and the rest was chiefly dirt mixed with more dirt. After filling the firebox with this stuff, we got the slashbar and clinker hook and worked what we could out, and shoveled it along the right-of-way.

Yes, we got wages—and our coal. A one-eyed burro kindly helped with the coal; we didn't need him to haul our wages. The coal we got in at night. The burro's rations consisted of a couple of chews of tobacco, a ham sandwich with Worcestershire sauce on the ham, and whatever other contributions came along.

To prove that our Leadville run wasn't so hard, I rode my bicycle, or walked and pushed the darned thing, from Como to Alma and Fairplay over Mosquito Pass. It was lively work. You needed a shillelagh to keep the mosquitoes from puncturing the tires.

The engineer for whom I fired was Buddy Swartz, a Cuban. While trying to haul a train with that mixed fuel I mentioned, Buddy knew all the words but they were not set to music. All I could do was to blush furiously and get off and hide behind the tank until the recital was over. Poor Buddy was in a turnover in 1900 and that was the end.—ARCHIE L. THOMAS, Box 43572, San Quentin, Calif.

A Speed Demon of the Gay Nineties

Photo by Bryant A. Long, 40 Spencer St., Hyattsville, Md.

This Weird-Looking Streamliner, Built by David Weems, Which Set a Record of 125 Miles per Hour in 1891, Now Stands Outside the National Museum at Washington, D. C.

FARMERS of Laurel, Md., midway between Washington and Baltimore, stopped their buggies in mild surprise one fall day in 1889 to watch the grading of a wide curving concourse through fields and swamps. This concourse was the Weems Electric Railway, which was soon to startle the world with its speed records.

David C. Weems, the inventor, and O. T. Crosby, engineer superintendent of the Sprague Electric Railway & Motor Co., laid out the experimental line with 29-inch-gage track, 16-pound rails on ties 16 inches apart, in a two-mile circle. Over this they ran a futuristic-looking steel car electrically powered from an overhead third-rail, hung from a wooden stringer inside a continuous framework "cage" which covered the track. The car weighed three tons. It was 21 feet long, 30 inches high and 24½ inches wide, had six truckless wheels, a pointed pyramid nose and solid smooth exterior, effectively streamlined, and carried no passengers. It had three 20 h.p. Sprague motors of 300 r.p.m. The inverted-T third-rail was contacted by copper brushes.

In Oct. '89 the car made 37.4 miles per hour on its first experimental run. Later the speed was stepped up to 42, to 52.4, to 70, and then to 120 m.p.h., timed by the meticulous editor of "Electrical Engineer" (New York). On one run the car jumped the rails, leaping 30 feet and tearing up 300 feet of framework. But, undaunted, Weems kept increasing the speed until, in April '91, his weird projectile whirled around the Laurel track at an authenticated 125 m.p.h., the fastest thing on wheels!

These experiments had been started with the idea of providing automatic inter-city package service in unmanned cars; but by 1891 they developed to the point where transportation experts were saying passenger trains could be hauled by this system "safely and economically" at 150-mile speeds between New York and Chicago. A traffic revolution was predicted. Gigantic interurban lines built on the Weems principle were to connect the big cities. The Weems Railway was reorganized with an announced capital of $2,500,000, and fantastic plans were disclosed to a waiting world. These plans were never carried out. But the queer tapered motorcar and its proposed trailers live on today in another form. The B&O "Royal Blue" which roars through Laurel is, in common with all other modern streamliners, an indirect tribute to David C. Weems and his speed demon of half a century ago.—Bryant A. Long.

Visitors at the Fair Will be Given the First Public View of the World's Largest and Heaviest Steam Passenger Engine, Operating at Speed. Although Her Tank Displays the Words "American Railroads." She Is Really the Locomotive Pictured on the Pennsy's 1939 Calendar—the Much Talked-About, Fast, Heavy-Duty, Experimental Giant That the Pennsy Recently Built in Its Altoona Shops

Railroads on Parade

The Biggest Show at the New York World's Fair Will Be the One Put on for Railfans by 27 Eastern Lines

THE largest structure on the ground of the World's Fair (which opens in New York City on April 30th) is the million-dollar Railroad Building. And the railroad exhibit, costing in all nearly five millions, will be hardly less superlative. The twenty-seven Eastern lines sponsoring it have underwritten a show which ought to earn top ranking.

Worth coming to see alone will be the exhibit in the "yards" outside the building. It will contain several trains from home and abroad: the complete *Coronation Scot* of Great Britain's LMS, just in from an extended tour of the East; an Italian passenger train and other equipment; two giant Soviet locomotives; a couple of Canada's latest engines; equipment and possibly trains from France and Poland. And Pullman and Budd, the American car builders, will have samples of their work on hand. But perhaps the most impressive sight of all will be the new 6-4-4-6 type passenger engine, mounted on friction wheels and running at speed. This locomotive, though it will bear the legend "American Railroads" is actually the much-discussed high-speed, heavy-duty experimental steam engine built at the Pennsylvania's Altoona shops recently. Weighing 519 tons with tender full, it is the largest and heaviest steam passenger engine ever built.

Also outside the main building is the immense stage on which *Railroads on Parade* will be presented. *Railroads on Parade* is a pageant by Edward Hungerford, railroad author and pageanteer, and will review American transport development from the covered wagon days to modern times. The spectacle will be presented on an outdoor stage, or series of stages, 250 feet wide by 100 feet deep. The forestage will provide broad highways for vehicular traffic and standard railway tracks for the "parade" of locomotives and coaches, ancient and modern; the stage proper for a performing cast of 200; and the backstage a channel for the review of early watercraft. The amphitheater for viewing the performance seats 4000.

The pageant story begins at the New York waterfront in 1829, with ceremonies attending the opening of the Erie Canal. These include a review of the steamboats of the time—a long line which followed within a few years the arrival there of the first steamboat, Robert Fulton's *Clermont*.

Photo by Railroad Photographs, 47 Royal St., Allston, Mass.

The "Coronation Scot," Streamlined Pride of the London, Midland & Scottish Railway, (Shown Here Northbound for Glasgow) Will Make a 3121-Mile Tour of the U.S.A. Before Being Shown at the World's Fair in New York City. Her Itinerary Includes:

March 21, Baltimore, Md.; March 22, Washington, D. C.; March 23, Wilmington, Del., and Philadelphia, Pa.; March 24, Lancaster, Pa.; March 25, Harrisburg and Pittsburgh, Pa.; March 26, Wheeling, W. Va., and Columbus, O.; March 27, Columbus and Dayton, O.; March 28, Cincinnati; March 29, Louisville, Ky.; March 30, Indianapolis and Terre Haute, Ind.; March 31, St. Louis.

April 1, Springfield, Ill.; April 2, Chicago; April 3, Kalamazoo and Battle Creek, Mich.; April 4, Detroit; April 5, Toledo and Cleveland, O.; April 6, Cleveland and Akron, O.; April 7, Youngstown, O., and Erie, Pa.; April 8, Buffalo, N. Y.; April 9, Rochester and Syracuse, N. Y.; April 10, Utica and Schenectady, N. Y.; April 10-11, Albany, N. Y.; April 11, Springfield and Worcester, Mass.; April 12, Worcester; April 13, Boston, Mass., and Providence, R. I.; April 14, Hartford and New Haven, Conn., and New York City. For Exhibition Hours en Tour, Consult Local Newspapers or Station Agents

Next is Quincy, Massachusetts, with a glimpse of America's first railroad in operation, the *Granite Railway,* three miles long, its oxen-drawn cars busy hauling granite blocks for the Bunker Hill Monument. Honesdale, Pa., follows with the scene of the first trip, on American soil, of a steam locomotive, the British-built *Stourbridge Lion,* as was the *John Bull.* England's priority in locomotive building having been acknowledged, the pageant now presents the first American-made locomotives, the *Best Friend of Charleston* (1829) and the *De Witt Clinton.* Both were built in the West Point Foundry, N. Y.

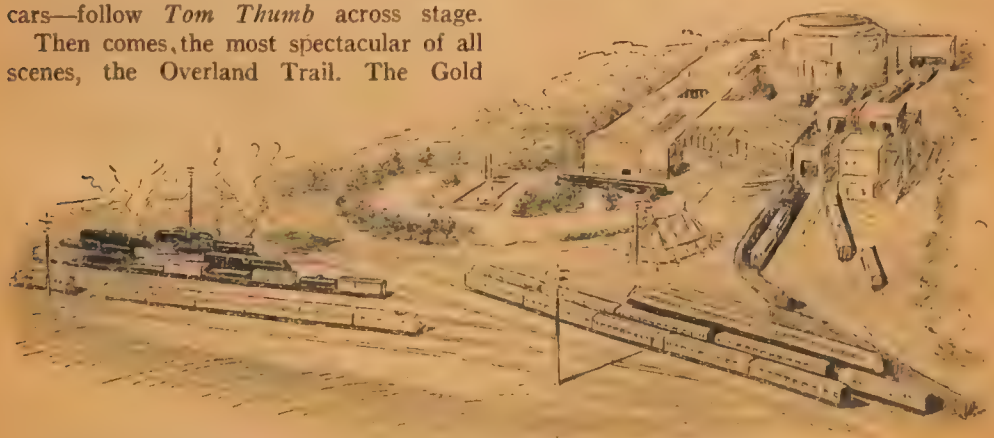
The scene shifts to Baltimore docks, in 1829, with its famous clipper ships loading for foreign ports, and the arrival on

the busy scene of the little *Tom Thumb* come to unhorse the horse-drawn railway the Baltimore & Ohio had planned to the Ohio River. Other old-timers—the *Atlantic* of 1832, with its passenger coaches, and the *Galloway* with the first freight cars—follow *Tom Thumb* across stage.

Then comes the most spectacular of all scenes, the Overland Trail. The Gold Rush is on and with it again the westward trek. Then comes an interlude, 1861—President-elect Lincoln on his way to Washington and his inauguration. Next is Promontory, 1869—the celebration of the completion of the first transcontinental railway across the North American continent.

Modern railway operation and service are featured in final scenes: The old railway "depot" with its primitive equipment, and modern-up-to-date city terminals; the old-time day coach, and today's air-conditioned cars; freight scenes, showing what speed and the refrigerator car have done for the transportation of perishables, and scenes in the engineer's cab and the caboose; dramatic representations of the operation of railways under flood conditions and other exigencies, the quick manning of repair and relief trains, the intricate provisions devised for the safety of modern railroad travel. The entire dramatic spectacle moves to music specially composed for it by Kurt Weill.

THE big attraction inside the building will be a diorama (40x160 feet), which is a scenic, small-scale representation of an Eastern railroad. This miniature railroad world uses model engines, trains,



The Great Railroad Building and Tracks Covering a Total of 16½ Acres Will Be the Largest Exhibit at the New York Fair. Among the Equipment Shown in the "Yards" (as Mentioned on Page 68) Will Be, of Course, the "Coronation Scot," Which the Artist Failed to Include in This Advance Sketch

A Dramatic Scene in the Pageant, "Railroads on Parade"; The Little Steam Engine "Tom Thumb" Comes to Baltimore, Md., in the Year 1829 to Challenge Horses as Motive Power on the New Baltimore & Ohio Railroad

barges, car ferries, signal towers, rotary car dump, roundhouse, coal tipple, lakes, waterfalls, oceans, trees, etc., with 3500 feet of O-gage trackage and 400 separate pieces of equipment. All will depict the complete operation of a railroad, even to the handling of coal from the mountains to the sea.

The Railroad Equipment and Supply Industry also has arranged a diorama called *Railroads in Building,* whose topographical feature is a mountainous landscape 80 feet by 28 feet. Spectators stand on a platform built around this huge "mountain." As they walk around it they behold all the materials, supplies, tools used in building the modern railroad. They see the raw materials "flow" from the mountains to the smelters, foundries, mills and fabricating plants and become finally incorporated in the railway system. While the main story will be told in the great animated model outside, its interior displays further exhibits, including operating models of equipment on a larger scale. The platform leads directly to the interior and the entire exhibit is set up in the great dome of the Railroad Building.

A Meet on the Sunset Route

By GLEN NORTON

A REDBALL freight was rambling east
One scorching summer's day
O'er a long straight stretch of desert track
On the main line right-of-way.

The sun was slowly sinking down
And soon would come to rest
In a fleecy cloud that hung low down
O'er a mountain peak off west.

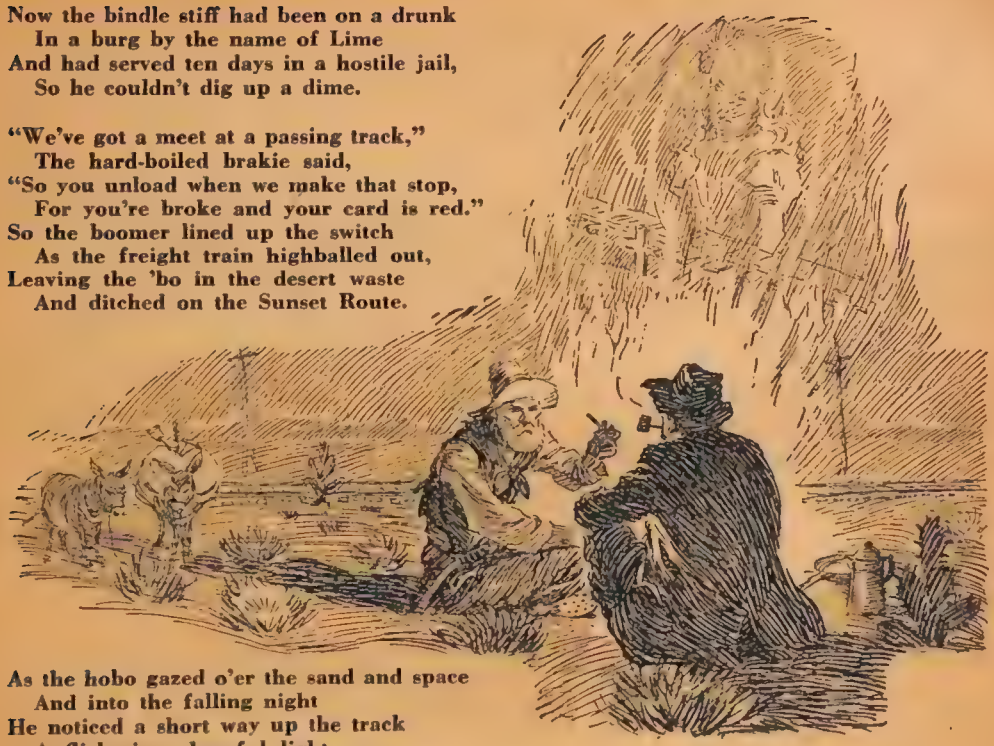
She cast her swiftly fading rays
On a boxcar, somewhat back,
Where an argument was taking place
'Twixt a bum and the rear-end shack.

Now, he wasn't a bum, but a bindle stiff;
And he looked both wild and hard
As he tried to mooch his passage east
On the strength of a "wobbly" (I.W.W.) card.

The brakeman he was a boomer tough
And sorter down on his luck;
He told the stiff: "If you ride this pike,
You'll have to produce a buck."

Now the bindle stiff had been on a drunk
In a burg by the name of Lime
And had served ten days in a hostile jail,
So he couldn't dig up a dime.

"We've got a meet at a passing track,"
The hard-boiled brakie said,
"So you unload when we make that stop,
For you're broke and your card is red."
So the boomer lined up the switch
As the freight train highballed out,
Leaving the 'bo in the desert waste
And ditched on the Sunset Route.



As the hobo gazed o'er the sand and space
And into the falling night
He noticed a short way up the track
A flickering cheerful light.
The light he saw was a sagebrush blaze,
And close by the flames there sat
A squint-eyed bird with a seam-lined face;
Just an old-time desert rat.

A couple of burros stood close by,
The mouse-colored Jimmy and Jack;
There was a frying pan and a coffee pot
And grub from out of the pack.
It all seemed good to the bindle stiff,
For he hadn't eat that day;
So he drew up close, and the rat looked up
And the Jack let out a bray.

"Hello, there, pard!" the stiff cried out.
"You shore are a welcome sight."
"Why, howdy, stranger!" the rat replied.
"You're out kind of late tonight.
Might as well come in and join the camp;
It's my turn, I guess, to treat.
If you'll help me hustle some sage for the fire
We'll rustle up something to eat."

The flames flared up and the scene grew bright
As the two sat face to face.
Then the hobo said: "It seems to me
That we've met before some place."
"Well, I was thinking the same damn thing,"
The desert rat replied.

"The feelin's been growin' stronger, too,
Since you've sat here by my side.

"Wait a minute now, until I take
Just one more look at you.
I've got it now; we were school-mates once
In a town in old Missou'.
Why, they used to call you Catfish June;
You lived with your Ma in a shack
.n the west end down by the railroad yards
And close to the Wabash track."

"Well, I'll be damned!" the hobo cried.
"Them words you speak are true;
But the thing that puzzles me right now
Is, who in hell are you?"
"You'll know all right," the rat replied,
"When I've told you my own name;
But before I do I would like to know
What became of a certain dame?

"You remember back at the East Park School
When a boy had to sit with a girl?
Well, I was the punk across the aisle
Who sat with a kid named Pearl."
"Do I remember?" the 'bo exclaimed.
"Why, sure as you're born, it's him!
I'm a lyin' honery sun-of-a-gun
If it ain't old Tank Pond Jim!

"Sure, I remember the whole thing now,
Since you mention the name of the girl;
For everyone in the whole town knew
You was always sweet on Pearl.
I also recall how jealous you were,
The quarrel that you had one day,
How you never even said good-by
To her, when you vanished away.

"Soon after that I too left town,
For mother had passed away.
There was nothing left to hold me down,
So I started me out to stray.
I've been a bindle stiff ever since
The day I decided to roam
And I've scoffed in every jungle camp
From San Diego up to Nome.

"Tampin' ties as a section hand
At a dollar and ten a day,
Working deckhand on a ferryboat
O'er San Francisco Bay.
I've harvested, I've herded sheep,
And I sure can take abuse.
I've picked apples in Wenatchee
And prunes in the big Palouse.

"I've labored as construction stiff
With a hard-rock dynamite crew
And every kind of railroad work;
But I'm gettin' old, I'm through."
The bindle stiff stopped talking
And he gazed across at Jim,
Who just sat there in silence
With his eyes glued dead on him.

When Tank Pond Jim arose at last
He looked off down the track,
Then said: "Now tell me, Catfish,
Did ever you try to go back?"
"Yes," said the 'bo. "I did one time,
Some thirty years ago.
And I'll tell you all about it, Jim,
I think that you ought to know.

"I was holding a job in Texas
For the old M. K. & T.
Up home it crossed the Wabash,
So it just occurred to me
To stay right there upon the job
And all my dough to save,
Then ramble up there once again
And look at mother's grave.

"I got into the town one morning
And down on old Reed Street
I met the officer, Charlie Quail,
Out lookin' over his beat.
Charlie took me in to breakfast,
Where we talked an hour or more.
He asked me what had become of you.
It seemed that he was sore.

"He said: 'I wonder if he knows
What happened to his girl?
She died about a year ago;
You know, the one called Pearl.'
He said he sometimes talked to her;
She used to hope and pray
That you would write a letter
Or come back to her some day.

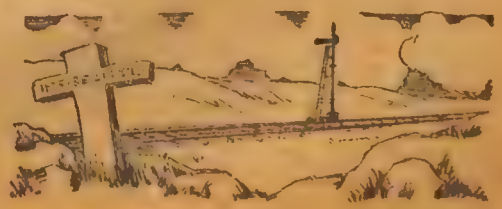
"And as the dreary years rolled by
She never ceased to pine;
But was loyal until the last,
Though you never wrote her a line.
So I told the cop that mother's grave
Was the reason why I came back.
He said: 'Pearl's buried down there, too,
Close by the Katy track.'

"And he added: 'If in your travels
You happen to see old Jim,
Tell him what Pearl confided to me
And what she was thinking of him.'"
The two men sat in deepest thought.
Then Tank Ponk spoke once more:
"You see them sacks that're layin' there?
They're filled with high-grade ore.

"It came from far out in the hills,
The vein's both rich and wide.
There's plenty gold for the two of us,
For you're stickin' by my side.
"There's a town called Winnemucca
Not so many miles away;
We'll start out in the morning,
We can make it in a day.

"By the time we mine out all the gold
We'll have a bale of jack
Then we'll wire to San Francisco
For a train to take us back;
"For we are going to that graveyard
Where Pearl sleeps, beside your Maw;
We'll put up the biggest tombstones
That them natives ever saw."

"Well, all that listens good to me,"
Said the hobo with a grin,
"And if you're finished talkin', pard,
What say you, we turn in?"
"Okay by me," said Tank Pond Jim,
"Let's spread the blankets out.
We'll flop here on the right-of-way
Beside the Sunset Route."



By the Light of the Lantern

Ask us what you want to know

RAILROAD questions are answered here without charge, but these rules must be observed:

(1) Not more than two questions at a time. No queries about employment.

(2) Always enclose a self-addressed, stamped envelope, to facilitate our getting in touch with you if necessary. We will print only your initials.

(3) Don't be disappointed if answers do not appear at once. They are printed two months before date of issue.

THE November issue of TIME says that the U. S. trucking industry pays $417,500,000 a year in taxes, or $89,000,000 more than U. S. railroads pay? Is this true?—A. E. M., S. Hadley Falls, Mass.

The statement is not quite literally true, and its implications are unequivocally false. The railroad tax figure applies only to Class I roads (those with gross incomes of $1,000,000 or more), does not include short lines' payments of about $5,000,000. But the mistake lies in comparing railroad and truck taxes on an even basis. Railroad taxes are not used to construct new tracks and dig new right-of-way, but for general governmental purposes. All the truck taxes included in the above figure go for highway construction and maintenance, and even so, according to careful surveys made by several states, fall grossly short of paying for the trucks' share of such expenses. If the trucking industry is allowed to count this $417,500,000 as taxes, then the railroads are justified in designating the $500,000,000 a year they spend on maintenance of way as taxes. Or more yet, since the public is not compelled to make up any deficit.

It is this kind of "figures" by which the trucking industry sooner or later is going to hang itself. Intrinsically, the truck is a wasteful method of transportation for hauls of more than 100 miles, and its usurpation of the train for greater distance is usually at the expense of the general economy. If it keeps up long enough, government ownership of railroads may be necessary, in which case the trucking industry conceivably may find itself forced to pay not only its share of highway expenses, but something in the way of a general tax.

✣

J. J. K., W. Duluth, Minn.—The word "hoghead", nickname for engineer, springs from the use of "hog" to designate locomotives that used an inordinate amount of coal. The story goes that it was first applied to the big Consolidation types, hence an engineer running one was known as a "hoghead". Another version has it that "hoghead" is distinctly an opprobrious term, and describes an engineer who handles his locomotive so inefficiently that she burns more coal than she should.

"Tallowpot" came into use to describe a fireman back in the days when the oil pots actually contained tallow, which the fireman poured into the valve chest when the engine was coasting. As a matter of fact, the oil cans of a locomotive still are called tallowpots, and the firemen occasionally along with them. The term seems to have been originated by the engineers, to express their superiority to the greasy firemen.

✣

H. H. McG.—Volume for volume, stainless steel or Cor-ten steel weighs no more or less than ordinary carbon steel. Cor-ten steel has more tensile strength than carbon steel, and stainless steel more than Cor-ten, and so a car of either can be built that much lighter, without sacrificing strength, by using thinner sheets of it. Moreover, carbon steel is often thicker than necessary to allow for corrosion, which affects Cor-ten steel very little, stainless steel not at all.

✣

C. R. S., Harrisburg, Pa.—The Pennsylvania-Reading Seashore Lines were formed as a result of the consolidation, in 1933, of the Atlantic City, Camden County, Seacoast, and

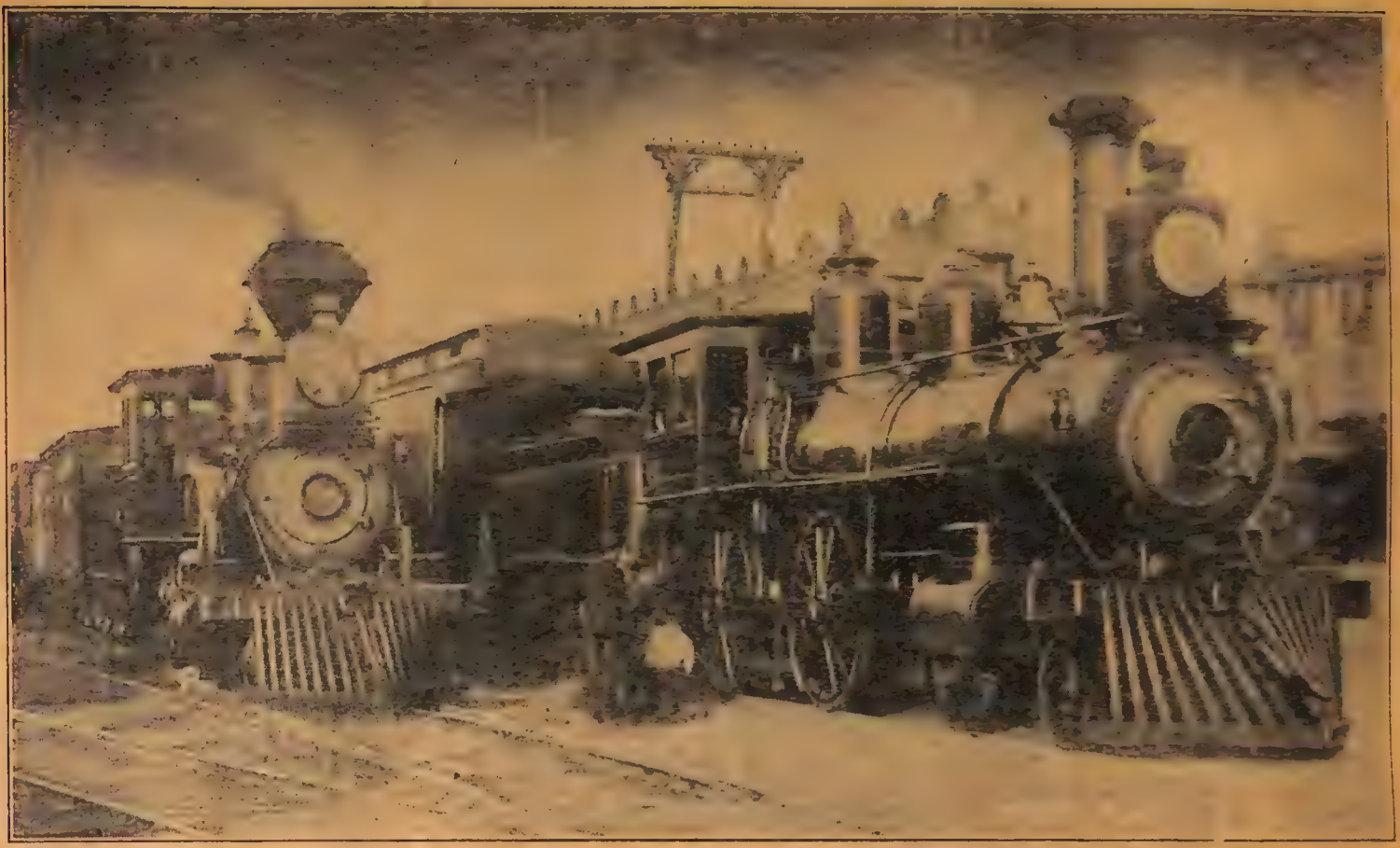


Photo by Railroad Photographs, 47 [illegible]al St., Auburn, [illegible]

Early Days on the "Old Reliable": The Nashville, Tenn., Station of the Louisville & Nashville in 1887. On the Left is the [illegible] Orleans Freight, Hauled by Mogul No. 130; Center Is 4-4-0 Type No. 3, About to Leave with the New Orleans Flyer (Ahead of the Freight). R. [illegible], Barely Showing Behind No. 3, Is 4-4-0 Type No. 71, with the Memphis Branch Train

Ocean City railroads. The Pennsylvania owns two-thirds of its stock, the Reading the other third.

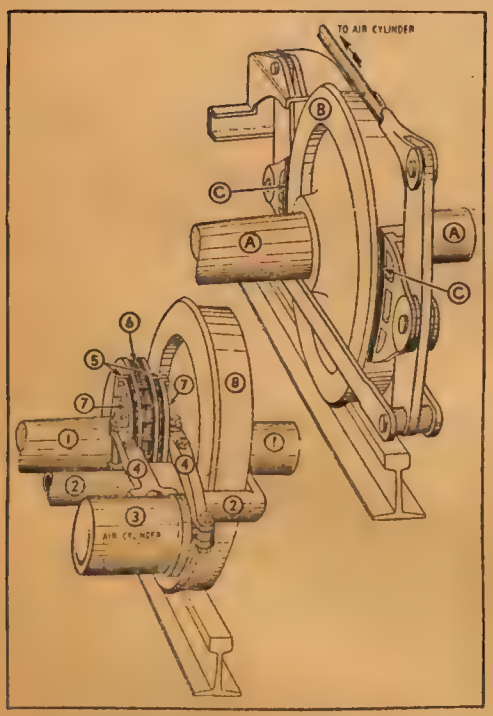
(2) Diesel locomotives are not allowed to operate in the confines of Grand Central or Pennsylvania stations in New York City (on account of exhaust gases), so even if the Seaboard Air Line's Diesels were run through to New York City they would have to be changed.

✣

E. L. T., Minneapolis—Never heard of the Kansas City Elevated Ry. Do you mean the Kansas City Elevator Co.? It was acquired by the Kansas City Southern in 1907, and owned a 650,000-bushel elevator in East Bottoms, Kansas City, Mo.

✣

F. W. K., Rutland, Vt.—Since the new 4-6-6-4 type engines built for the UP, NP, WP, and D&RGW are not compound, all the cylinders are of the same size and receive steam directly from the boiler. The piston rod on the front cylinders is unusually long to avoid using a too-long main rod. You will note that the front set of cylinders, because of the truck wheels, is located farther ahead of the drivers than is the rear set.



The Burlington's Newest "Zephyr," between St. Louis and Kansas City, Is Equipped with Drum Brakes, Like Those on Automobiles, Rather Than with Conventional Wheel Brakes, Shown on the Right. The New Type Brakes, on the Left, Stop the Train More Evenly, Avoid Overheating the Wheels

✣

F. B., Chicago—The Yale Short Line, which operates from Casey to Yale, Ill., was formed in 1919, when the Sidell & Olney RR was split up as follows: the portion from Sidell to Kansas became the Kansas & Sidell, the portion from Kansas to Casey became the Westfield (now abandoned), and the portion from Yale to Olney was dismantled.

✣

F. S. L., Montreal—Only one of the Pennsylvania's K-4 Pacific type engines is streamlined: the 3768. It is black with gold and stainless steel striping and decorations.

(2) The Canadian National's latest streamlined 4-8-4's are practically identical to those of its subsidiary the Grand Trunk Western. These engines easily could wheel a load of 1000 tons at 85 miles an hour on level track, could reach 100 with 700 or 800 tons.

✣

H. F. S., Montreal—It is a common practice to equip locomotives with one or more sets of flangeless wheels. Many of the Pennsylvania's K-4 Pacifics have "blind" center drivers, for instance; and any locomotive with an inordinately long wheel base will be apt to have two sets of flangeless drivers to enable it to round the curves more easily. This of course does not detract from the engine's power, but often increases it, eliminating the binding action of flanges which press against the rails too tightly. Consolidation type engines have been known to use flanges only on the first and fourth set of drivers.

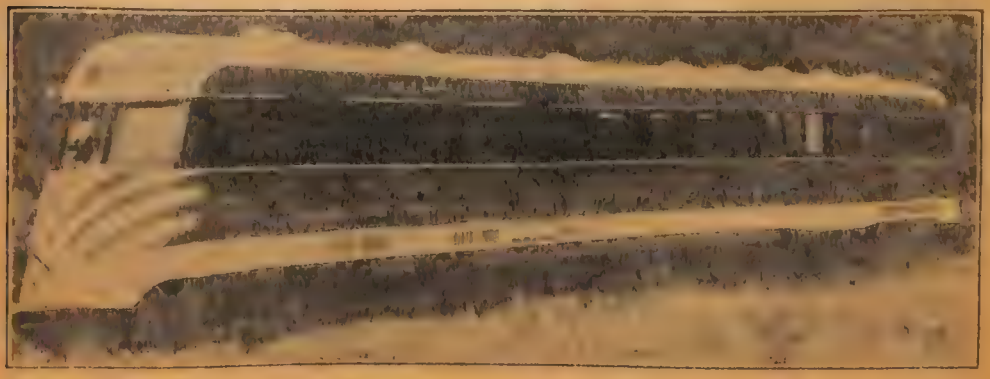
✣

R. G. D.—Although the Baltimore & Ohio "President" series of Pacifics and the Pennsylvania K-4's are quite similar, the Pennsy engines weigh a trifle more on the drivers and exert 5,540 pounds less starting tractive force. This might explain your observation that the B&O engines have a tendency to slip their drivers more in starting a train than do the Pennsy engines. Not that we are willing to sanction your implication that this is invariably the case; your observation has no scientific

The B&O's New "Capitol Limited" Carries a Barber, a Maid, and (Above) a Train Secretary, Features Which Usually Are Found on Extra-Fare Trains Only

Photos by E. G. Baker, Harrison, Ark.

Until Midsummer of 1938, Missouri & Arkansas Trains Nos. 201 and 202 Looked Like This. Operating Daily between Neosho, Mo., and Kensett, Ark., 266 Miles, They Lost Money for a Long Time, and Were Finally Replaced by Two Air-Conditioned Motor Cars. Like the "Egyptian Zippers" of the Chicago & Eastern Illinois, They Were Built by American Car & Foundry. They Carry Baggage, Express, U. S. Mail, and Have Room for 33 Passengers. One of Them Is Shown Below



An Old Brooks Ten-Wheeler, Built about Forty Years Ago, Was No. 13 of the Illinois Central. She Is No Longer in Service

value until you have included every instance in a given period.

(2) The Winchester & Wardensville was built in 1923, used to run from Winchester, Va., to Wardensville, 40 miles, now runs only to Rock Enon, 23 miles. It has one locomotive, is losing money.

✢

WHAT is meant by a man's "bidding in for a run"?—A. C. A., Brooklyn.

Enginemen and trainmen work on a seniority basis; that is, the men who have worked for the company the longest have prior choice of runs. When one is open, therefore, the men who consider themselves eligible ask for or "bid in" on the run, which is then awarded to the man with the most seniority. Once on a run, however, a man may be "bumped" or displaced by any "older" man who has been displaced or wants the job for any other good reason.

✢

S. G., Washington—The head engine of a double-headed train has the air, and the engineer of the second locomotive works steam or shuts off steam whenever the head engineer does so. Same applies to a pusher engineer at the rear of a train; he can tell what is going on without having to depend upon a specific signaling system.

(2) See answer to A. C. A.

After Two Years of Construction, the New $10,000,000 Los Angeles Union Station Opens Early in April, 1939. This Shot of It Was Taken from the Track Level and Shows the Semi-Tropical Patio between the Restaurant and Grand Concourse

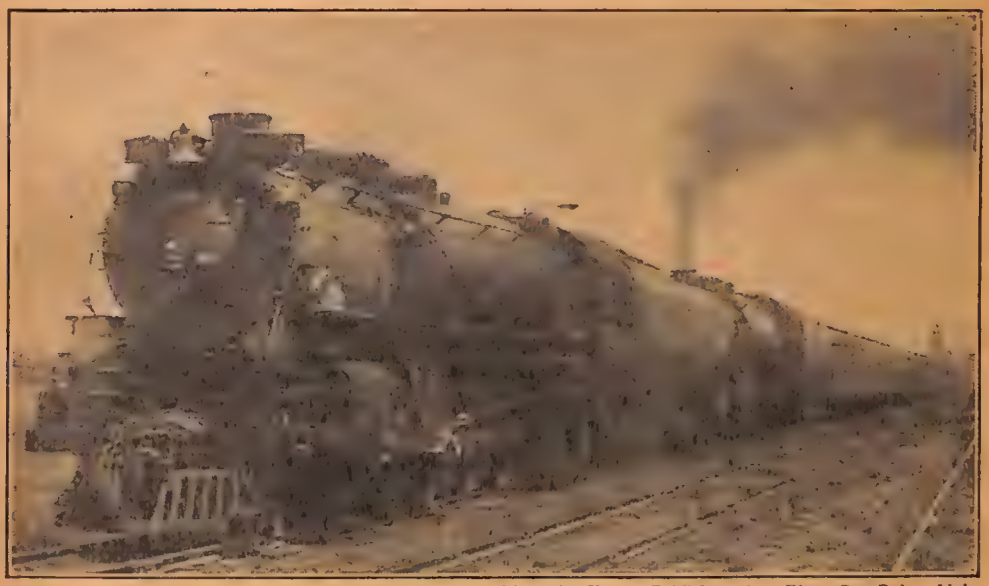


Photo by Henry Griffiths, 1316 River St., Boise, Idaho

Doubleheading the "California Fast Mail" out of Cheyenne, Wyoming, for a Good Start up Sherman Hill. The Train Consists of 14 Standard Cars and UP Nos. 801 and 804, New 4-8-4 Types

J. S., Niagara Falls, N. Y.—The Baltimore & Ohio's 4-4-4 type engine has 17½ x 28-inch cylinders, 80-inch drivers, 350 pounds pressure, weighs 217,000 pounds without tender, exerts 28,000 pounds tractive force—35,000 with booster. Its 4-6-4 type which was built at the same time has 19 x 28-inch cylinders, 350 pounds pressure, 84-inch drivers, weighs 294,000 pounds, exerts 34,000 pounds tractive force — 41,000 pounds with booster.

(2) Fastest freight train between New York City and Buffalo is the NYC *Merchandiser*, covering the 436 miles in 10 hours, 50 minutes. The Lackawanna and Lehigh Valley's swiftest westbound trains make their runs in 12 hours; and the Erie's No. 86 in 12 hours and five minutes and its No. 87 in 12 hours and 45 minutes.

✢

C. R., Cincinnati, O.—The Middletown & Cincinnati, built about 1890, was acquired by the Cincinnati, Lebanon & Northern in 1902. The CL&N always had been controlled by the Pennsylvania, which owned most of its stock.

(2) The Dayton, Lebanon & Cincinnati, chartered in 1889 and opened in 1903, ran from Lebanon to Lebanon Jct., O., 23 miles.

✢

L. C.—Mileage between Chicago and Oakland Pier via C&NW, UP, and SP is 2259; via Burlington, D&RGW (Moffat route), and WP is 2528. Mileage from St. Louis to San Antonio, Texas, is 923.6 via MP, 1038 via Katy main line. Chicago to St. Louis is 284 miles via Alton, six miles farther via C&EI.

✢

R. S. F., Mt. Kisco, N. Y.—The Beyer-Garratt type of articulated locomotive is available in America through the American Locomotive Co., which is empowered to build it. Why it hasn't been tried out is hard to say. It presents many advantages over our articulated engines: does not have to be turned, rides easier, goes around curves easier, employs tender weight for adhesion. Moreover, it has been well tested abroad, and comes stamped with some success.

(2) Photo and all available information on the 6-4-4-6 type engine built by the Pennsylvania on page 68.

✢

R. L. McL., Rockville Centre, N. Y.—The Rock Island System consists of the Chicago, Rock Island & Pacific and the Chicago, Rock Island & Gulf. The Burlington System (often labeled the Burlington Route) consists of the Chicago, Burlington & Quincy, owning the Colorado & Southern; Quincy, Omaha & Kansas City; Ft. Worth & Denver City;

Wichita Valley. The Burlington and the Rock Island own jointly the Burlington-Rock Island, which runs from Hubbard to Teague to Galveston, Texas. The *Sam Houston Zephyr* (Burlington) and *Texas Rocket* (Rock Island) are operated over this line from Houston to Teague, and over the Forth Worth & Denver City from Teague to Ft. Worth.

✣

W. F. F., Fort Wayne, Ind.—Following is a list of railroads publishing employees' magazines:

Atlantic Coast Line
Baltimore & Ohio
Boston & Maine
C&O, PM, NKP
Chicago & Eastern Illinois
Gulf, Mobile & Northern
Erie
Frisco
Louisville & Nashville
Illinois Central
M-K-T
Missouri Pacific
Milwaukee Road
Norfolk & Western
Southern Pacific
Union Pacific

The Mutual Benefit Association of the Pennsylvania also publishes the *Mutual Magazine*, mostly devoted to news of the Pennsy. There probably are a few others, but this list covers the most important.

B. R. M., Bourlamaque, Quebec—Your description of the gage "registering the pressure in the cylinders" is hardly sufficient for us to identify it. Perhaps you are thinking of the Loco Valve Pilot gage, in the cab above the brake levers. This looks like a speedometer, and in fact has a red hand indicating the speed. It also has a black hand registering the amount of cutoff. When the locomotive is being worked hard the engineer adjusts the reverse lever so that the black hand is in the same position as the red hand; when it is not being pushed to capacity he adjusts the reverse lever so that the black hand is far ahead of the red hand as possible at that particular speed. This device eliminates the human factor in judging the engine's cutoff.

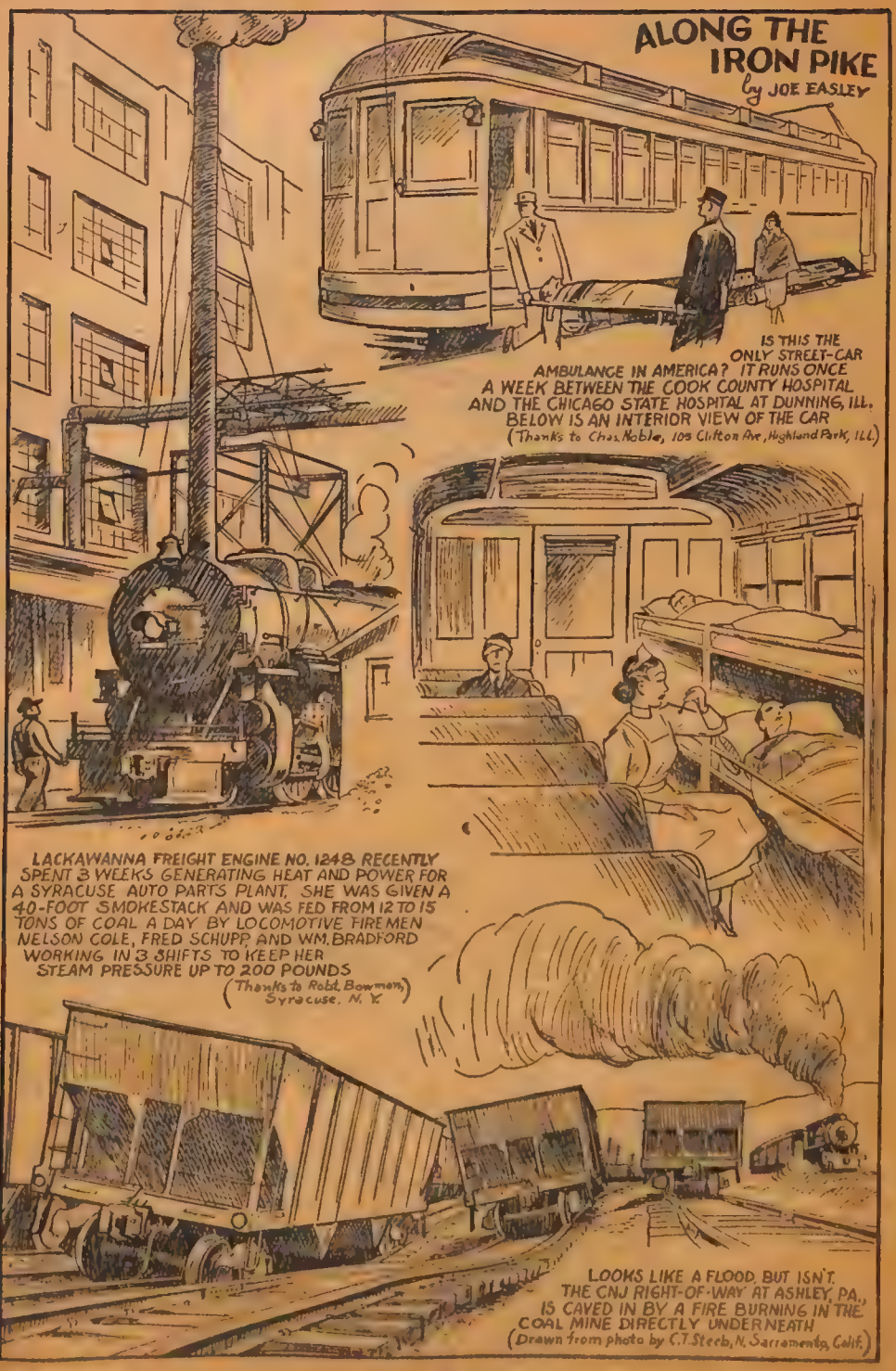
(2) The 2-8-0 is called the Consolidation type. It is a lowspeed, heavy duty locomotive, developing maximum horsepower at about thirty or forty miles an hour with its rated load.

Additions and Comments

WE have received a few letters correcting what are claimed to be inaccuracies in the New Haven roster, printed in the January and February issues. While we are grateful for them, we are at a loss to know what to do about them. Our roster was checked by the New Haven motive power department before it went to press, in November, 1938. Several corrections were made in the list we submitted, so we felt we had a roster as nearly authentic as one could be.

Photo by H. Hargraves, Pres., Dorchester Elec. Ry. Club, 49 Dix St., Dorchester, Mass.

This Narrow-Gage Amusement-Park Line at Pine Island, Goffs Falls, N. H., Carried 6000 Passengers Last Season. Its Signals and Switches Were Bought from the Manchester, N. H., Street Railway. The Lone Car, Painted Silver and Red, Is Powered with an Old Buick Motor


ALONG THE IRON PIKE
by JOE EASLEY
IS THIS THE ONLY STREET-CAR AMBULANCE IN AMERICA? IT RUNS ONCE A WEEK BETWEEN THE COOK COUNTY HOSPITAL AND THE CHICAGO STATE HOSPITAL AT DUNNING, ILL. BELOW IS AN INTERIOR VIEW OF THE CAR
(Thanks to Chas. Noble, 109 Clifton Ave, Highland Park, ILL.)
LACKAWANNA FREIGHT ENGINE NO. 1248 RECENTLY SPENT 3 WEEKS GENERATING HEAT AND POWER FOR A SYRACUSE AUTO PARTS PLANT. SHE WAS GIVEN A 40-FOOT SMOKESTACK AND WAS FED FROM 12 TO 15 TONS OF COAL A DAY BY LOCOMOTIVE FIREMEN NELSON COLE, FRED SCHUPP AND WM. BRADFORD WORKING IN 3 SHIFTS TO KEEP HER STEAM PRESSURE UP TO 200 POUNDS
(Thanks to Robt. Bowmen, Syracuse, N. Y.)
LOOKS LIKE A FLOOD BUT ISN'T. THE CNJ RIGHT-OF-WAY AT ASHLEY, PA., IS CAVED IN BY A FIRE BURNING IN THE COAL MINE DIRECTLY UNDERNEATH
(Drawn from photo by C.T. Steeb, N. Sacramento, Calif.)

The New Assistant Trainmaster

"Opportunity Keeps Knocking at the Door Where Efficiency Resides," They Told Martin Kell; but They Gave the Promotion to Some Other Man

By E. S. DELLINGER

MARTIN KELL never did pass through that bungling greenhorn stage which usually marks the first months of a railroad brakeman's career. From the day he went out on local freight to learn the road, he was possessed of a certain efficiency and poise which set him apart from the general run of students. The men wondered at it; but even had they known, which Kell made sure they didn't then, they would not have agreed that his having taken a correspondence school course in railroading had anything whatever to do with his efficiency.

Perhaps it didn't. The fact is, Kell was inspired by a burning desire to become a railroad official, to rule four hundred miles of steel, to ride a private car, and to draw a salary which would lift him and his dream family above the common level. It was this ambition which impelled him, long before the World War abruptly ended his schooling, to begin preparing himself, to learn whatever books could teach him of train rules, report and order forms, train operation, and methods of moving traffic over a railroad.

Why he chose to go up through the train service instead of the office, heaven only knows. George Sheppard, a friendly brakeman on the Green

Martin Wanted to Know: "Are You Fellows Going to Stand Around and Let That Engine Burn Up?"

River Branch, to whom Kell confided his ambition before he hit the trainmaster for a job braking on the Oklahoma Division, warned him:

"Railroads are no longer makin' trainmasters out of conductors and brakemen. They're makin' them out of office clerks. There is no promotion from the train service. When you go brakin', seniority spots you ahead of one man and behind another, and you stay in your spot. If you want to be a 'brass collar,' take a business course and hire out as trainmaster's clerk. That's the road to the swivel chair."

But Martin Kell had a head of his own. He disregarded Sheppard's advice, just as he had disregarded the advice of his Uncle Henderson down in the Green River oil fields on a branch of the TO&E Railway south of Bannon. The uncle was drilling oil wells and Martin had been working for him. It was a lucrative industry in those early days of the war. The uncle urged Martin to stay there; but when America entered the big scrap and the cry went up for able-bodied men to run the railroads, the young fellow gave up his position with Green River Oil and hired out braking on the Oklahoma Division.

It was on a blustery November night that Kell drew the nickname which stuck to him for years, and at the same time stepped into the official. The nickname was "Trainmaster" and it came to him in connection with the great influenza epidemic of 1918. George Sheppard had been promoted to conductor. He was running a crew in freight pool; while Kell was holding the job as parlor brakeman, not because he was efficient, but because he had been marked up on the extra board four days ahead of the kid who was on the smoky end.

Called on his rest, Martin came down shortly before ten o'clock to prepare a train of short-time Texas cattle for the ride east through the Oklahoma hills. The night was black. The cold waycar shivered beneath the merciless sweep of the year's first blizzard. Mercury slipped past the "16" mark and headed down toward China.

North wind spat mouthfuls of sleet against the waycar windows and sent it tumbling into ridges on the north side of the rails. Kell shook down the cinders, filled the big stove half full of shopwood soaked in kerosene, struck a match to it, and dumped in a hod of lump coal to deaden the bark and whine of the cold wind clawing at every crack and crevice.

WHILE the brakeman was lighting his markers and polishing their lenses with a silken wad of executed train orders, Conductor Sheppard came falteringly up the caboose steps, and, with a surly grunt which did not tally with his usually cheerful greeting, staggered toward the glowing stove.

The younger man looked up in quick surprise. George Sheppard was a teetotaler. He boasted that he had not "touched a drop" since he had been fired off the Santa Fe for a wreck and Rule G, years before. But if he wasn't drunk tonight—

Kell shoved aside the markers and followed. The conductor was hovering over the stove. His eyes were red. His face was flushed and dry. His teeth chattered, and his hands shook until he could scarcely pull off his mittens, and Kell asked:

"What's the matter, George?"

He had no desire to see the conductor run afoul of the liquor rule and a hard-faced trainmaster. But Kell had guessed wrong. Sheppard croaked in a strained, unnatural voice:

"Flu, I reckon."

In the deadening grind of long hours on duty, the brakeman had momentarily forgotten the scourge of influenza which was filling the cemeteries and striking terror to the hearts of a war-mad world. Fully a third of the road men east out of Stringfield were in bed or in the graveyard. The rest had been carrying the added load, fighting stubbornly to keep traffic moving over the TO&E.

Kell felt the conductor's hot face and counted the pulse hammering on at a hundred a minute and skipping one beat out of every five.

"How long have you been sick?" he asked anxiously.

"I waked up at 6.30 with a cold and a sore throat, and I've been gettin' worse ever since."

"You'd better go back to bed, old top, and let them call another conductor."

"There are no conductors," Sheppard wheezed. "I called in at 7.30 and tried to lay off; but they've run four troop trains out of here this afternoon, and if I don't go out, they'll have to hold this stock here until 1.30 in the mornin' waitin' for a train crew."

"They'd better lay out a stock train a few hours than kill a conductor," Kell said determinedly. "I'll get a doctor. You beat it back home and go to bed till you're able to do a job running a train. They can't work men in the shape you're in tonight, and you know it."

But Sheppard refused to go home. Maybe he'd heard wise heads whispering the superstition that when a man quit the open air and went to bed with the flu, he was likely to come out in a wooden kimono. Maybe his sense of patriotic duty drove him to it. Whatever it was, he went changing his clothes; and by the time Kell had hung out the markers, the conductor was all dressed and ready to head for the yard office to get his train out of terminal.

Clad though he was in wool and leather and sitting four feet from a redhot stove, in a caboose whose tem-

perature wavered around ninety-nine, he was shaking until he had to put his false teeth in his pocket to keep from losing them. The brakeman pulled down the ear flaps of his heavy woolen cap and tied them under his chin and was reaching for his club to go let off the binders before the engine came on, when he noticed that the conductor was still sitting on a bunk and shaking and muttering to himself.

"What about it, George?" he asked. "Are you going, or shall I tell the office you're too sick to make it?"

"I'm goin'," Sheppard barked. "Sure I'm goin'. I've never laid off on a call yet, and I don't intend to begin now."

He stumbled gamely to his feet and headed for the front door. Kell knew that once they were out of the yards and on the main line, he himself could easily handle the work and let Sheppard go to bed. He knew also that for a man in Sheppard's condition to fight his way a half-mile through the blizzard and work around the draughty offices, gathering up orders, books, and waybills, would be little short of suicide.

Kell stopped him at the door.

"Listen, George," he urged. "Don't go over there tonight. If you're determined to take this train through, then go to bed here in the crummy. I'll get your bills and orders."

SHEPPARD stopped with a hand on the door and studied the youth through hot, red eyes. Parlor brakemen had often taken a flu-stricken captain's place that fall in checking out trains. But those were men of long experience, men who were either promoted conductors or at least almost ready for their examinations.

Kell had come to work less than six months before. In that length of time the average student learns to pack hot boxes after a fashion, to do a little simple switching if an old head is standing over him to boss the job, to go out flagging when he is called, and to come in when the whistle blows; but he certainly knows nothing of conductor's duty or responsibility.

George Sheppard, with the old railroader's contempt for railroad knowledge gleaned from books, would have crawled on his hands and knees through the sleet rather than trust a student if he had not been too sick to give a hoot. But Sheppard was sick. He asked hoarsely, "Can you do it?"

"Sure I can." Kell tolled off on the digits of his left hand the duties he must perform—get bills and orders, deliver orders to engineer, secure names of crew, check register, register out, check train to make sure all cars were as listed. "There you see, I know exactly what to do, and I can do it."

"All right! Go ahead; but for gosh sake, don't make any mistakes. And don't forget to check signals on those eastbound passenger trains, for they've been runnin' a lot of extra sections this afternoon; and if you overlook one of them, it means all our jobs and maybe a head-on collision."

When livestock rides the railroad, cowpunchers go with it to look after the animals. Kell knew the caboose would soon be full of men smoking, spitting, and arguing war and politics. He made a bed in the left cupola window, tucked the conductor snugly into it, and headed for the yard office, letting off the brakes as he went along the train.

Short-time livestock has right of way over a one-track railroad. Federal statute limits to twenty-eight hours the time shippers and carriers may hold animals in cars without unloading for

feed and water, with an added eight hours by mutual consent. Once a railroad accepts a shipment, the road must see it through. If the time grows short but there is still a chance left to rush it to destination without unloading, the train is put on a fast schedule and sent to town.

When Kell arrived in the office, yard clerks had already made up the trainbook. They had listed the cars, giving initial, number, seals, and such other information as rules required. They had collected the waybills into a neat bundle. The dispatcher had fixed the train up with an order to run extra with right over everything except the passenger trains, and the roundhouse had given the best engine left in it after the troop trains had gone.

Kell explained nothing when he asked for the trainbook. Parlor brakemen often did that chore for their conductors when they were on their feet and working. The clerk remarked when he handed the book through the wicket:

"You're getting thirty-four of them, all cattle. You ought to 'ball the jack* with them, because you're handling two hundred tons less than redball rating."

Kell studied the page, observing that all blanks had been properly filled and seals listed. Then he shoved the book into his coat pocket and crossed to the order window.

THE operator was acting as medium in an argument between the dispatcher and the yardmaster concerning Number 35. Kell gathered that the westbound merchandise train was expected in about 1.30 a.m. with no track clear for it to crawl into until the next crew, whose rest was up at 1.45, moved a train out of the way. When the argument ended, the operator turned to ask gratingly:

"What's your trouble, brakie?"

"Have you fixed up that stock for the east yet?" Kell asked.

The operator had the orders ready, but he didn't fall over himself accepting the brakeman's signature. After Kell had explained the emergency which made it necessary, he filled in the clearance card, tore it and the orders off the pads, and handed them through the wicket.

While Kell was checking them to see that he had received all orders listed on the clearance, Trainmaster Webber came into the office. Webber was tall, lean, grizzle and hard as the steel glinting in his keen blue eyes. When Kell had finished his preliminary reading, the trainmaster asked:

"Where's Sheppard?"

"Back in the caboose."

Kell scented trouble for somebody. Trainmasters are hired to enforce the code of rules, and the code requires conductors to sign their own train orders.

"What's he doing back there? Why isn't he over here getting this stock train out of terminal?"

"He's sick."

"How sick?"

The trainmaster flicked the ash off the cigar and eyed the brakeman searchingly. Kell wondered if he was remembering that Sheppard had had a Rule G charge against him on another railroad.

"He's got the flu, and he's too sick to come out in a blizzard such as this."

"If he couldn't work, why didn't he lay off and let them use another man?"

*Editor's note: "'Ball the jack" is railroad slang for "make good speed." The first word is a shortening of "highball," derived from the go-ahead position of a now obsolete type of ball signal; while the term "jack" is sometimes applied to a locomotive. "Redball" means fast freight.

"He tried to," said Kell, "but there were no conductors."

Mr. Webber didn't check the board to see. He was already aware of that fact. "So you're doing his work for him, huh?" he asked with a skeptical lift of the eyebrows.

"Yes, sir."

"Kind of young to go running a train, aren't you? If I remember correctly, I hired you in June."

"That's right."

"This sure is rich, Sheppard sending a five-months' student over here to sign his orders and check these registers."

"He didn't send me, sir. I *came*."

The dozen men in the office had quit work to listen in. Most of them were smirking and grinning because they expected to see a cockey student brakeman's pencil-pushing ambitions abruptly annulled. But Kell neither laid down the orders nor headed for the caboose hunting the conductor. He continued respectfully, but firmly:

"I understand, of course, Mr. Webber, that you are trainmaster here. If you had rather hold this stock here until another man is eligible for duty, that is your problem. But I assure you I can handle the work just as well as the next man and save you three or four hours on a train and engine."

The trainmaster's keen eyes flickered and a smile crinkled the corners of his hard mouth. "You're pretty sure of yourself for a student, aren't you?"

"Yes, sir. I am sure of myself, because I know what I can do. I could pass your conductor's examination right now if you'd give it to me."

"It is not due for several years, young man."

THE trainmaster lighted a fresh cigar and studied Kell through the smoke. Two switchmen winked at each other and ran grimy fingers around bill caps to indicate expanding crowns.

Kell admitted that emergency situations might arise which would block him, but he insisted that so long as nothing out of the ordinary arose, he could make out as well as anyone.

"If it does," he concluded, "I shall wake up the conductor, provided he is rational; and if he isn't, I'll stop the train until I know what to do."

Kell turned to sort the orders into two piles and check each against its clearance. Mr. Webber strolled up to the locked case where the crews were marked up for duty. When he came back he eyed the student quizically and asked:

"Aren't you the boy who resigned a three-hundred-a-month job as disbursement manager of an oil company in the Green River company to come here braking?"

"Yes, sir."

"All right. Go ahead. Let's see if you can get this train out of town without making a bobble that'll put two of them together."

Kell set to work as methodically as the oldest conductor on the line. The operator had given him two copies each of seven orders, including the order to run extra, a three-hour run-late on 1st Number 7 and the annullment of 2nd Number 7. He finished sorting them into two sets, one for the engineer, one for the rear end, and carefully checked each against the clearance. Then he folded each set separately and passed them to the trainmaster for his inspection.

He next proceeded to make out a register check for the engineer. Consulting his timecard, he listed all first-class trains less than twelve hours overdue. Those more than twelve hours overdue were dead. That is, they had

lost their running rights and could move only on train orders. He indicated on the check that Numbers 5, 3, 9, 2, and 8 had run with *no signals*, that four sections of Number 6 had gone carrying the green, and the fifth section with *none*.

The trainmaster was watching over his shoulder. After Kell had double-checked the list and folded the time-card, Mr. Webber asked:

"What about Number Seven?"

"We have a run-late on them which should let us go to Bogfield or Conroy for them," Kell answered promptly.

"Good! And Number 35?"

"Is a second-class train. Our running order gives us right over all except first-class."

The trainmaster nodded approvingly. He appreciated efficiency, even when it rested in a student brakeman trying to do a job running a train.

Kell asked: "What about it, sir? Do we go? Or do we wait for another conductor?"

"It looks like we're going," the trainmaster answered chuckling.

"In that case," said Kell, "I'll register out."

Now, as you know, railway officials keep a train register in each division point. In these registers, big books with cross-ruled sheets a foot by two, conductors are required to give information concerning each train they take out of or bring into a terminal.

Kell drew the big book toward him. He indicated in the proper columns that they were ready to leave Stringfield at 10.25 p.m. on November 2; that they were running extra and carrying white signals; that Gann was engineer and Sheppard conductor; and that their train consisted of thirty-four cars weighing fourteen hundred tons.

He and the trainmaster left the office together and charged through the blast of sleet and rain to the engine.

DARBY GANN was a nervous young runner, highly suspicious of everything and everybody, particularly trainmasters. When Kell handed him the orders and the register check, he jumped to the conclusion that the trainmaster was pulling a test on him, trying to trap him in the violation of a rule. So he asked suspiciously, "Where's the conductor?"

"In the caboose sick," Kell informed him.

"Who made up this register check?"

"I did."

"Did you sign Sheppard's name to these orders?"

"Yes, sir."

"Well, you can take 'em an' wipe your nose with 'em," Dan growled, shoving the flimsies into Kell's resisting hand. "You birds don't catch me taking a train out of this village on a register check made out by a student brakeman, nor running under orders signed by him."

The trainmaster had entered the cab behind Kell. He readily admitted that the engineer was justified in his refusal, declared that under ordinary circumstances, such procedure would certainly not receive official sanction.

"But," he concluded, "this is an emergency in which the rule must be shaded for the good of the service. I assure you that the register has been properly checked, and that your orders are all there. Now read them and let's get this stock moving. We have no time to spare if we put it into market without unloading it. As a measure of safety, I shall ride the caboose until we take siding for Number Seven."

Darby Gann's mind was not at ease.

He still thought Mr. Webber was trying to pull some sort of test on him, but he read his orders and whistled off. Kell highballed, wrote the names of the head brakeman, engineer, and fireman into the book, dropped off the engine when she started moving, and shielding the page from rain and sleet under his slicker, checked the list of cars as they filed by him.

Six stockmen were in the car when he caught it. He checked their transportation; and talked over the orders with Sheppard, who was rational but deathly sick. The trainmaster took a position on the right hand side of the cupola where he could watch the train as it rolled out into the open country, while Kell set to work on reports.

A freight conductor has something to do, of course, besides sit on a cushion and watch the scenery and the girls. Kell made up a consist, indicating the length, weight, and nature of their train, and threw it off to the operator at Northup. He opened his delay report and his time slip, listing the men in the crew and the time they had been called for duty. He made out a switch list for the use of the yardmaster to whom he would deliver his train at Oldham, and filled in a wheel report giving every item of information necessary in keeping track of the cars he was hauling.

Northup, Avon, Niagara. Darby Gann announced the approach to each station with one long blast of the engine whistle. At each station, Kell quit writing, stumbled over stockmen's outstretched feet to the rear platform and gave a highball with his white lantern. He did not return immediately inside the rolling office. He sniffed the icy air for the odor of burning grease. He watched the order boards and the station platforms, because he did not know at what station the dispatcher might hand up orders changing those with which he had checked out of Stringfield.

GANN made a good run, but not quite good enough. When he whistled for Bogfield at 11.32, he lacked two minutes having time to go to Conroy against Number 7. Kell had quit his unfinished wheel report to study the timecard. While the whistle was sounding and he was debating whether to go on short time or stay at Bogfield, the trainmaster came out of the cupola with his watch in his hand.

"Are you going to Conroy?" Mr. Webber asked quickly.

"We're two minutes shy of clearance."

"Do you intend to chance it?"

"George never goes on short time, Mr. Webber; but if you say go—"

"You're running this train tonight for Sheppard, young man. I'm riding with you."

They went to the rear platform, but Kell did not give the signal authorizing the engineer to go. Darby Gann waited a moment. Then he whistled one short blast, to inform the rear end he was staying at Bogfield. Before the whistle echo died in the rattle of sleet on the waycar roof, two more blasts rang out in quick succession, and the caboose leaped forward as the engineer opened his throttle and took the slack out of the train.

Both Kell and the trainmaster knew then that the dispatcher, anxious to move their stock without delay, was calling them up the main line to give them an order. They guessed this order would instruct Number 7 to wait for them at Conroy a sufficient length of time for them to go down there for the meet. The trainmaster returned to

his cupola, and Kell remained on the platform to catch the order.

Bogfield was a telegraph office, a water tank, and two long passing tracks. The railway came in from the west on a wide curve, went through on a tangent, and out toward the east on a descending one percent grade. The descending track was so crooked that only once in four miles could a trainman see the tenth car ahead of his cupola. The telegraph office was located just west of the one street crossing, and a little nearer the east switch than the west one.

Now, the TO&E was equipped with electric block signals, but not with automatic train control. The block signals were so hooked up that either a red order board at the telegraph office or a red head-block at one end of the passing track set a caution board at the other. As Darby went through the west head-block, he whistled a *Waaa-wa-wa-waaa!* in answer to the caution signal. In clear weather he could have seen the east head block then, but through the sleet and rain it was not visible until he was within ten car-lengths of the telegraph office.

Kell was not positively watching the block signals as the engine approached them. That is the duty of the men in the cab. The men on the rear end of the train expect to find them at *stop*, because when the engine passes over the signal she sets it at *stop* and holds it there until the train has cleared the block, a mile or more beyond. Kell did not consciously look at the east head-block, nor consciously observe whether it stood at *stop*, *clear*, or *caution*.

As the caboose passed the office, he went down to the bottom step, caught the order hoop, removed the tissue, glanced at the clearance, and read: "1st Number 7, eng. 1644, wait at Conroy until 12.01 a.m. for stk exa east, eng. 54."

That was the order the acting conductor needed to let him go to Conroy for his meet. He crossed the platform to give a highball. The engine was then approaching the cut, twenty car-lengths east of the block signal, and the signal was red. That's the way it should have been, for the engine had passed it; but Kell paused with his lantern raised. He remembered then that the signal light had been red when he had gone down his caboose step to grab the order.

INSTEAD of giving a highball, he gave a *stop* sign. But Darby Gann neither answered nor obeyed it, because his engine had then gone out of sight around the curve.

Kell dashed into the caboose, hurled six pairs of cowboy boots, and raced for the cupola where the conductor's brake valve was located. As he was reaching for it, the trainmaster grabbed his hand and asked:

"What's the trouble, Kell? Did you miss that order?"

"No. I didn't miss the order. That hoghead's run a red board."

"Run a red board?"

"Yes. That east head-block was red when he went into it."

"How do you know?"

"Because this westbound passing track holds thirty-six cars east of the road crossing. The operator was standing west of it when he handed me the order, and we've got only thirty-four cars. I know it was red when I went down the step to get that order, and he was at least ten car-lengths from it then."

Sheppard tried to get up, but the trainmaster told him to lie still. After a second's reflection, he said:

He Remembered That the Signal Light Had Been Red

"Kell, you're right! That block was red when we came in sight of it, but I didn't figure out that the engine hadn't passed it. I'll bet a dollar that Number 35's overlooked his hand and is coming over here against us. Pull the air on him, quick!"

Kell was perfectly cool. He handled the brake valve judiciously, because he knew that to set the brakes in emergency from the rear on a train running fifty miles an hour might pull out a drawbar and pile up a cattle train. He let the air out slowly until the gage hand went down ten pounds. By that time, the engineer had caught the signal, had answered it, and was setting the brakes with a heavy service application.

It was then Kell made the one student blunder which might have proven fatal to him if his train had hit another head-on. Instead of waiting for the train to stop, he left the cupola through the window, heading for the engine.

"Aren't you going to put out a flag?" the trainmaster shouted after him.

"We don't need a flag," Kell shot back. "There's a yard limit board behind us to protect the territory of this water tank. I'll run over there, and if nobody shows up, we'll back in here for Number Seven."

But somebody showed up. Ten seconds after the train stopped, Kell heard Darby Gann blast the night with a long-drawn wail, whistling *stop* to another train. The acting conductor scurried down the ladder and sprinted for the engine. When he arrived, Number 35's engine was standing where she had stopped, fifty feet from the nose of the stock train, and the crews were comparing orders.

Number 35's engineer wanted to know who they were and what they were doing out on track that belonged to him. Darby explained that the track did not belong to him, that they were

stock extra Number 54 with right over everything except the varnish—"varnish" meaning passenger train.

"I've got no orders saying that," growled the hogger.

He went through every clearance, but the order on the stock train was not listed. The dispatcher had failed to include a copy of it when he had cleared the merchandise train at Oldham, and had not given it to him later.

THE dispatcher was discharged for neglect of duty. For running a signal set against him, Darby Gann was set back firing. He fired for another year; but after the boys came home from France, the Brotherhood, pleading his inexperience, secured his reinstatement on the right-hand side.

As a result of his activities that night Martin Kell remained in the official spotlight fifteen years. Some of the fellows who did not know the full circumstance censured him, because he had not managed to cover up the engineer's blunder. In derision they nicknamed him "Trainmaster."

Darby Gann, aware that if it hadn't been for Kell's efficiency, he himself might have gone into a fatal head-on collision, became his loyal friend and tried to silence all discrediting rumors; but the nickname stuck, and the brakeman went down the railroad bearing the name "Trainmaster" Kell.

Local officials kept an approving eye upon him. They treated him with a respect which they did not accord to other brakemen; but as George Sheppard had warned the young fellow before he went braking, he remained in his niche, "spotted ahead of one man and behind another."

After Kell had been braking for six years, he was called up for his conductor's examination, and passed with the highest score ever earned by an applicant on the Oklahoma Division. The man ahead of him passed by the skin of his teeth and the mercy of the trainmaster. Nevertheless Kell was marked up behind him. Kell did not resent his treatment. He told George Sheppard it was the only way it could be done, but he did not give up hope.

The TO&E used the Brown system of discipline. Men were credited with *merits* for exemplary service and assessed with *demerits* for incompetency or neglect of duty. In the superintendent's office, Martin Kell's record was plastered heavily with merit marks for little things, for discovering hot boxes and broken arch-bars which other men had overlooked, for doing other men's work in order to get trains over the road; but not one demerit was marked against him.

When Trainmaster Webber became Superintendent Webber, it was rumored that Kell might move up to fill the vacancy; but the rumor was without foundation. They brought in "Pop" Short, a man in his late fifties who, contrary to Sheppard's rule that officials always came up from the office jobs instead of the road ones, had been promoted from freight conductor. They made him trainmaster over the Stringfield subdivision.

Kell remained in his niche on the conductor's board. When business was good, he ran a crew of his own in freight pool. When it wasn't, he broke behind on Sheppard's crew. Whether he was running his own train or braking on another, he was always on the alert, ready to go.

There were times when he almost wished he had remained in the Green River oil field, for it had developed beyond the fondest expectations of its promoters. Green River, the jerkwater

farm town where he had grown up, had become the magic city built on oil.

But oil was also doing wonders for the TO&E. From Bannon, halfway between Stringfield and Oldham, where the main line crossed the river, the road had sent out branch lines groping like hungry fingers after slimy oil. These branch lines had come under the jurisdiction of the Stringfield sub. That jurisdiction had increased from a hundred sixty-five miles to two hundred ninety-eight. The trainmaster's work had piled up, and Pop Short was howling for help or a subdivision.

AT LENGTH, when Kell had been working fifteen years, Superintendent Webber called him into the office and asked if he would consider taking the job as assistant trainmaster on the Stringfield sub.

"It sounds good," Kell replied eagerly. "What would be the duties and responsibilities?"

"For the present you would work under and report to Mr. Short. You would probably be out on the line much of your time, and your chief responsibility would be to keep things going on the branch lines out of Bannon. But you would also have authority on the main line. And," the super concluded, "when Mr. Short retires, which in the natural course of events will be within a very few years, you would doubtless move up into that vacancy, provided you make good."

Kell admitted he had been waiting a long time for just such an opportunity.

"I figured you had, Martin," Mr. Webber said, smiling bleakly. "I read it in the way you handled the job that night you took Sheppard's train out during the flu epidemic. Men don't do things like that unless they have their eyes on a high rung of the ladder. I've been watching you ever since."

"How soon will you expect me to take over?" Kell inquired.

"I can't set a date. The General Manager will be through here immediately after the first of the year. I expect to receive his okay when he comes, but it would naturally be some time in the spring before we could make the change."

As soon as he could break away from the interview, Martin carried home the good news to his equally ambitious young wife. Mrs. Kell was the daughter of a minor railway official. For years she had been pushing, scheming, and pulling wires to get her husband ahead; and now, when she learned about Mr. Webber's offer, she was delighted and a little surprised, for she had gone through spells of discouragement as the years came and went leaving Martin still chained to the conductor's board.

Now, however, they began making plans to step out. They bought a new bungalow, one upon which they had long cast wistful eyes. It was the kind of bungalow which would make a home for a trainmaster, or even for a division superintendent, for Kell did not expect to *cling to* the official ladder; he expected to *climb* it.

In the latter part of December they moved into this new home. Mrs. Kell, graciously rising to the occasion, checked the "social register" of Stringfield and invited in the who's who in railroading to a combined house-warming, promotion celebration, and New Year's Eve party. In addition to the railroad men, Martin invited his Uncle Henderson at Green River, who was now a wealthy oil refiner. But the uncle wrote back caustically that he was too

busy to attend and that if Martin had swung along with him fifteen years before, instead of hiring out on the railroad, he'd probably be general manager of the plant by now and making *real* money.

On the night of the party, when a large group of well-wishing railway men and their wives were assembled in the Kell bungalow, snow was weaving a shroud for the dying year; but neither that fact nor the merriment within gave a hint of onrushing disaster. Usually when fate strikes, it strikes without warning; and so it was in this case.

At 11.45 they settled down to watch the old year out. At 11.48 the high-pitched wail of the roundhouse whistle rang like a banshee's scream through the falling snow. Somebody said it was blowing too early, but a second later they realized it was not blowing too early.

The first measured blast died. It was followed quickly by another, and a third and a fourth. Four blasts of the roundhouse whistle was the call for the wrecking crew to clear a smash in the east. Fate had struck!

EVEN before falling snow had smothered the last echoes, the telephone tinkled its imperative summons. Kell strode to the recess and picked up the receiver.

"Kell's residence," he called.

"That you, Trainmaster?" The youthful callboy's voice was brisk and self-important. Kell secretly believed the nickname would soon become a title of respect.

He answered: "Yes, it is."

"Listen, Kell. There's a stock train in the ditch beyond Bogfield. I want you for the wrecker outfit *at once.*"

Kell had not been first out. He had not expected a call before noon tomorrow. But when the callboy orders a wrecking crew, he grabs the first man available for service, the man easiest to find and the surest to hit the ground running. Kell accepted the call and asked guardedly:

"Was anyone hurt?"

"Not that we know of. Is Mr. Gann there at your place?"

Engineer Gann, patterning after Kell, had thrown himself heart and soul into his work after his reinstatement. Absorbing confidence and inspiration from the young trainman, he had become one of the crack engineers of the division. He was to the engineers' extra board what Kell was to the conductors'. When emergency arose, when blizzards raged and other men developed sudden cold or were bereft of dearly beloved grandmothers, the callboy rang up Kell and Gann, and they never failed him.

Kell responded quickly: "Yes, he is."

"Will you call him for me? I've got to hunt up two brakemen and a fireman. And you two fellows get down here as soon as you can. Highball Wade turned sixteen of 'em off the curve at the foot of Bogfield Hill right in the face of the Texas mail."

When a train is in the ditch the railroad concentrates its energy upon one thing—to run the wrecking crane and clear the line. Kell relayed the call to Darby Gann. Gann rushed home for his grip. Each man swallowed a cup of hot coffee, kissed *at* his wife, and raced through the snow to the freight yards.

The yards were still as if the falling snow had frozen them. No boxcars creaked along the tracks nor switch hogs crawled over snowy leads. They were tied up waiting for the wrecking

train to go, for there must be no delay.

Superintendent, trainmaster, roadmaster and wrecking foreman, all had left Kell's party. They arrived on the run, and each took charge in his own special sphere. The wrecking boss tolled and marshalled his men. He instructed cooks to check their lockers to make sure they had provisions for the crew. The roadmaster wired section men to be out on the line, where the wrecking train could pick them up and take them to the scene to build new tracks or straighten old ones. Trainmaster and superintendent hurriedly arranged for detouring traffic over other lines.

Kell strode into the office where he had registered out George Sheppard's train that winter night fifteen years ago. He checked and signed the register and got his order. Darby Gann brought on the engine; and twenty-seven minutes after the call had come, they were ready to load and ride.

BUT there was delay. A freight had been heading out of Northup when the wrecking call came. Dispatcher Dan Ridlon, unable to get hold of its conductor, had been forced to hold the big hook in the yards until it arrived. While the crew were waiting and harried officials were anxioulsy scanning the curtain of falling whiteness for a headlight, Ridlon came running out of his office with a transmitter about his neck.

"Kell!" he shouted.

"Here!" the conductor answered promptly, running to meet him. "What is it, Mr. Ridlon?"

"Thank God for one conductor I can find when I need him! We're going to miss you, Kell, when they make you an official." He laid a hand on the conductor's snowy sleeve. "Listen, son," he continued. "Bogfield just called in. There's a double-decked car of sheep on the ground that has to be transferred. I want you fellows to take two empties up with you. I'll have the yardmaster throw them on you as quick as I can find him."

The yardmaster was in the switch shanty lining up the night's work for the crews. The freight was whistling for the mile. Road men are not required to make up their own trains in terminal; but Martin Kell, always watching to avoid delay, said promptly:

"I'll cut off my engine and pick them up with it, Mr. Ridlon."

"They're in Number 7, but there's two cars of coal ahead of them."

"We'll switch out the coal," Kell cried. "Come on, boys. Let's get those stock cars."

Men who worked with Kell moved when he spoke. Not because they feared him, but because there was a ring in his voice which inspired them to duty. Engineer Gann sprang to his post. The head brakeman sprinted through snow to line the switches. The dispatcher patted Kell's arm and trotted back to his desk to keep the traffic moving. Kell leaped away, cut the air behind the tender, called for the slack and signalled out.

Darby stormed out of the wrecker spur behind the superintendent's office and plummeted down the lead. Kell coupled him into the two coal cars and kicked them into an empty track. The head brakeman tied him back into the two stock cars, and Kell went on the roofs to let the brakes off of them.

The cars were covered with a six-inch blanket of wet snow. Brakes set with clubs yesterday were hard to release by hand tonight. Kell managed the first one while they were running out; and then hurried to the second,

because he knew that unless he released it while the car was moving, he would have to call for a club. He loosed it as Darby was backing the cars into the wrecker spur, kicked the dog out of place, and spun the wheel to free the chain.

That night again, Kell blundered because his mind was concentrated upon duty, not personal safety. His engine had cleared the main track before he had cut it off, but he was not certain it would clear now with the two stock cars added. If it didn't clear, the incoming freight might side swipe it, might derail it, and delay the wrecking train. He darted over the snowy roof, intending to go down the ladder and his clearance before the freight, now coming close, plowed into them.

Darby had been moving rapidly in answer to a signal of a nervous lantern. As Kell stooped over, groping for the grabiron, the lantern went out and back in a washout stop signal. Darby set the air. The rolling cars stopped still and smacked the wrecker. Kell's feet went from under him. He clutched for the iron, caught a handful of wet snow, and went sliding off the roof into a six-inch blanket of it.

SUPERINTENDENT and trainmaster ran to him, but when they arrived Martin Kell was already on his feet, trying to light his lantern and mumbling something about stars falling through the snow. Mr. Webber clutched his arm and asked solicitously:

"Are you hurt, boy?"

"Not much," Kell answered gamely, though he felt as if every rib in him had been jarred loose from the backbone.

"Will you be able to go on the run? Or shall we call another conductor?"

"Sure, I'll go on the run. It would take a half-hour to get another man down here. I'll be all right as quick as I can find my heart and catch my breath. Come on, you guys! Don't stand around fretting over me. Cut in that air and pump off these brakes so we can leave town when this drag clears."

If Mr. Webber had been aware how serious the injury was, he would not have permitted Kell to leave Stringfield. But no one was aware of it, for the victim gamely squared his shoulders and walked back to his waycar.

There was a foot of snow at Bogfield and the wind howling through the hills. Kell switched the wrecking crane ahead of the engine and rode it to the wreck. He found that sixteen cars had been reduced to broken wood and twisted steel.

All night and until noon next day, Martin waded snow halfway to his knees passing signals from the wrecker foreman to Darby Gann as the big crane dragged mangled stock cars out of the ditch to be burned on the spot or hauled back to the repair shops in Stringfield. He stayed up on nerve until the wreck was cleared, but when he arrived at Bogfield he had to be carried out of his caboose on a stretcher.

That night he went into pneumonia, complicated by five broken ribs and an injured spine. He was in the hospital eight weeks. While he was there, the General Manager stopped in Stringfield and discussed their problems. He authorized the employment of an assistant for Mr. Short as soon as funds could be made available. Mr. Webber himself told Kell during the first weeks of his illness, told him because he thought the information might put the fight into him and give him a strong incentive to speedy recovery.

It had exactly the opposite effect.

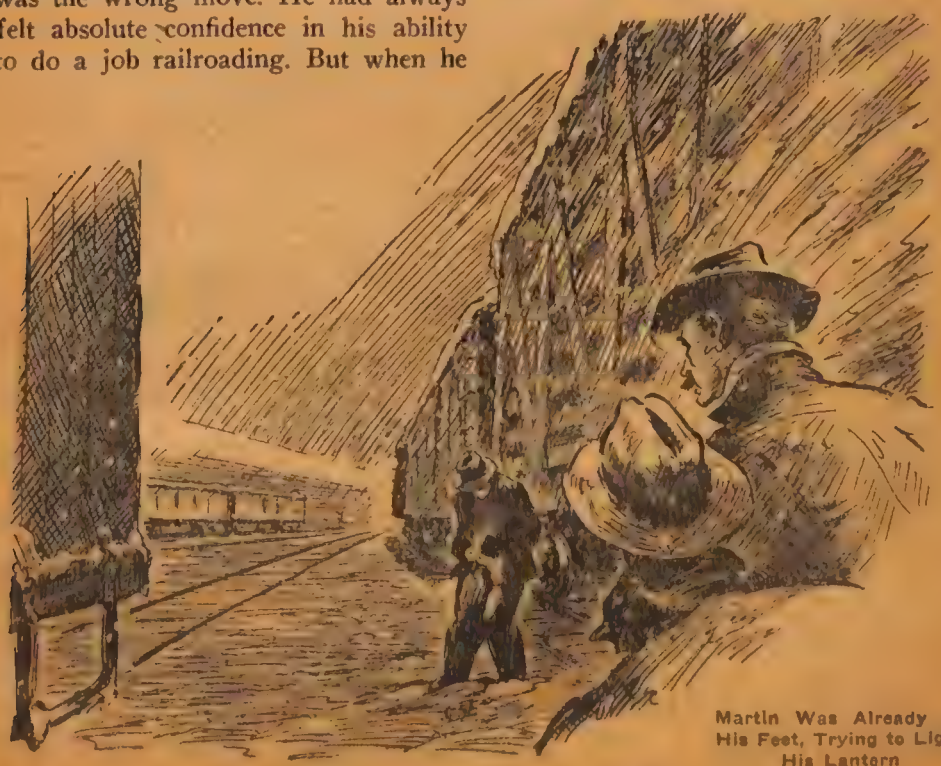
Kell's fall had tangled up the nerves in his spinal cord and changed his whole nervous reaction. Before, he had been afraid of nothing. Now, he was obsessed with the fear that the chance for which he had worked and waited fifteen years might go to somebody else while he was sick. The obsession grew, until he lay awake fretting and worrying because he couldn't get up and go to work. At length, when he was discharged from the hospital, Martin was a nervous wreck; but he didn't know it. George Sheppard told him:

"You'd better take it easy. Either loaf around town for awhile or else run out to the coast while you're waiting for this job to open up."

But Kell marked up on the extra board and went running a train. That was the wrong move. He had always felt absolute confidence in his ability to do a job railroading. But when he went to work this time, he worried constantly about orders, fearing he might overlook one and get fired, or commit some other blunder which would interfere with his promotion.

The TO&E had bought big engines and gone hauling mile-long trains. The middle of March, Kell was called to run ninety-five empty boxcars east through a pea-soup fog. They took siding at Bogfield to meet the Texas Mail and a westbound extra. It was midnight then.

ONE chief functioning part of the automatic airbrake system is the triple valve. It is through the action of this triple valve, admitting air to—or drawing it out of—the brake cylinders that the engineer releases and applies the brakes. Sometimes dirt col-



Martin Was Already on His Feet, Trying to Light His Lantern

lects in the triple so that the brakes "stick"—that is, fail to release when the air goes into the train-line.

It is the duty of trainmen to discover sticking brakes; for unless they are promptly released, wheels slide and flatten or roll, get hot, and break. In fair weather they can be spotted at night from cab or cupola by the stream of sparks sloughing from them, in daylight by the stream of smoke and dust. But when visibility is low, as in fog or snow, the only way to find them is to walk alongside the train, feeling of each wheel to see if it is hot.

In ten years "Trainmaster" Kell had earned a hundred merit marks finding sticking brakes on other men's trains. That night he had one on his own. It was thirty-eight cars behind the engine. It had been sliding the wheels ten miles when they took siding at Bogfield.

Some member of the crew should have discovered it, because they were in Bogfield an hour. The head brakeman dropped off the head end at the road crossing east of the office. Fog was so thick he could not pass a signal, so he told the engineer when he left the cab:

"I'll stay at this crossing. If nobody comes to use it, we won't cut it. If they do, I'll open an anglecock and let a little air out of the train-pipe. You give me the slack and then pull ahead two car-lengths."

That's the way men signal sometimes when they can't see lantern flashes. The brakeman stood on the crossing and watched thirty-three cars roll by him. They were running perfectly. When the train stopped he went into the office. He talked to the operator to pass away the time. He did not walk by the office on his way in, nor on either of six trips he made to the crossing to see whether anyone wanted to use it. He did not go near the car with the sticking brake.

Kell's parlor brakeman that night was an old codger whose rheumatism bothered him when the weather was bad. Kell himself was still weak from the effects of his illness, but he let the brakeman stay in the caboose and he went to the office to check the order board. He looked over the train on his way. He followed it for fifty-five cars, feeling the wheels and sniffing for hot boxes. When the Texas Mail showed up, he crossed the main line ahead of it and walked the platform to the office. This left seven cars which neither he nor the head brakeman saw while they were standing still.

Usually, when a train was pulling out of siding, men in charge of them stand on the ground and let them run by. But that night it commenced raining while they were there. Kell never had let rain interfere with duty before he was hurt, but that night he remained in the dry instead of watching the train run by. He caught the caboose, unaware that he was dragging an empty boxcar. He discovered it forty miles farther on, but he had to set it out because all eight wheels were flattened until it wouldn't run.

FLATTENING wheels is a railroad crime. Officials discipline men for it and accept no alibi. Mr. Webber did not call Martin Kell into the office to ask why. He treated him exactly as he would have treated any other conductor, assessed him and each of his brakemen with ten demerits and warned them to watch their trains more carefully in the future.

Those were Kell's first brownies. He would not have felt more deeply humiliated if he had been sentenced to the penitentiary. They were not

going to look good on his personal record when he called the other boys on the carpet for not looking after their trains. He could hear some of those devil-may-care brakemen telling him right now: "You wasn't so hot yourself, if I remember correctly. Didn't you burn up a pair of wheels one night dragging a car from Niagara to Bannon?"

They were ten big reasons why he wished he'd taken Sheppard's advice and gone to California two weeks ago, and ten ugly devils dancing on his aching head when the callboy routed him out of bed at midnight for a stock train east at 1.40 a.m.

A new timecard was going into effect at 12.01 that morning. The timecard is the running right of regular trains. Kell had gotten his copy the previous afternoon and had looked it over. That is, he had looked over the passenger schedules. Freight schedules did not mean much on the TO&E. The card listed Numbers 46 and 62 for the east, and their opposites, 45 and 61. If there was enough eastbound freight in the yards to make a train around midnight, the dispatcher ran it as Number 46. If not, Number 46 was annulled. Not one of those freight trains had changed leaving time for fifteen years. Kell did not look to see whether they had changed this time.

He doubtless would have looked when Dispatcher Ridlon told him he was running as Number 46, but when he had come to the yard office to get bills and orders, the callboy, the telegraph operator, and Darby Gann, who was pulling him that night, all commenced razzing him about those brownies and wanting to know why he had pulled freight cars with the brakes set on them.

"Trying out these new engines to see how much more tonnage you can put on 'em when you get to be trainmaster?" the operator wanted to know.

"Naw, he's practicin' up on tests so he'll know how to give 'em right when he gets to be trainmaster." That was the callboy.

"Nothing of the sort," Darby put in breezily. "Kell told me the other day that when he got to be trainmaster, he was goin' to put out a bulletin that every crew on a drag of more than ninety cars must set at least one brake in the middle of the train to keep fast hogheads from exceedin' the speed limit."

Kell had an answer for all of them. He would not for anything in the world have let them know they were getting under his hide, but they were. The recollection of those brownies loomed so large in his consciousness that he didn't think to check the timecard to see what time Number 46 was due out of Stringfield. Unaware that its time had been changed from 12.20 a.m. to 4.35, he registered out at 1.45 and left town with a train two hours and fifty minutes ahead of time.

Why didn't someone else discover it? For the same reason that "Trainmaster" Kell didn't—other ideas were holding the focus of attention. Ridlon, for instance, had been dispatching trains for thirty years and had never bulled an order. Both brakemen were promoted conductors, the fireman was a promoted engineer, and Darby Gann had been running an engine out of Stringfield for fifteen years. But in spite of their experience, they boarded a train that was not due to leave for nearly three hours and took it out.

IT WAS one of those perfect March nights which Nature sandwiches in between weekly rainstorms in the

southern Ozarks. The old moon was crawling up a sky full of stars whose light was mellowed by the thin gauze of mists rising from the moist earth; and the odor of growing things oozed in through waycar windows to mingle with odors of grease and coal smoke whipping back from the head end as Darby Gann hurled his premature Number 46 east at fifty miles an hour.

The hind brakeman was in the cupola watching the train. Kell was at the table working reports and switch lists. He wrote automatically. His mind was elsewhere.

He recalled that on the new timecard, the Texas Mail was not due out of Bannon until 3.55. They should go there for the meet if Darby ran the Bogfield tank, and he probably would. If they did, the crew would troop into the new coffee shop for a bite to eat while the hounds were servicing the engine.

Bannon had become a thriving city since the oil boom struck south of it. Before then it had been only a coaling station on the TO&E. But now there were refineries, and warehouses. The TO&E kept a yard goat there, and several freight crews working the branch lines tied up nights in Bannon.

When he was promoted, Martin decided, he would spend much of his time there. Of course, he hated to leave the wife, but she could come down to spend the week ends with him; and besides, he would soon have his headquarters in Stringfield, because Pop Short was growing old. Being promoted wasn't all joy, though. It had been fun running a train, fighting his way through the traffic. He was going to miss the eternal clack of wheels and the blast of the engine whistle. Listen to them now!

He threw off his consist at Avon. He checked the order boards as Darby Gann called them to him. After he had thrown off the consist he reread the order instructing him to wait at Bannon until 4.00 a.m. for Number 45. Damn those brownies! Why couldn't that lazy head brakeman have walked back by those cars instead of making a dash for the office? No, it was not the brakeman's fault any more than it was his.

Darby whistled for Bogfield and whistled through. He was going to run the tank. He was figuring, like Kell, that he could make Bannon for Number 9 if he kept going.

Kell went out to stand on the platform until they had passed the office. The semaphore at the east end of town was green tonight. He remembered that other night when it had been red. He went back into the caboose, and just to make sure the parlor brakeman was awake, shouted: "What time's Number 9 due out of Bannon?"

"3.55," the parlor man answered promptly.

"What time are we due there?"

The brakeman had the answer to that one, too, on the *old* timecard. He replied without even looking at it to make sure:

"Four-thirty."

That was the first time Kell had even thought about checking the time on his own train. He had no sooner asked the question than he reached for his timecard. Cool as a trainmaster pulling a test, he unfolded the card and glanced down the list of second class trains. He saw the black figures—"Lv Stringeld 4.35 a.m." staring him in the face. He could not believe his eyes. He blinked them twice, trying to change that accusing "4.35 a.m." to "12.20 a.m.," but it refused to change. He blinked again.

THE engine had already passed the east head-block and was going into the big cut east of Bogfield. He flung down the card, knocked the chair over, leaped twice, and grabbed the conductor's valve.

"What's eatin' on you?" the parlor brakeman yelled. Nobody had ever seen "Trainmaster" Kell lose his head.

"Your timecard!" was all Kell could say. "Look at your timecard!"

He pulled the air and struck out over the tops for the head end. Darby Gann was waiting for him when he crawled through the coal gate.

Darby was growing fat and funny. "What's wrong, Trainmaster?" He asked lightly. "Did you go to sleep and dream I'd run another red board?"

"No, you didn't run any red board, but we've all run ourselves out of a job on this railroad."

"How do you get that way?"

"Did it ever occur to you that railroad officials might change the time of a freight train without sending every train and engine man on the run a telegram about it?"

Darby had cut out that part of the schedules pertaining to the Stringfield subdivision and fitted it into a neat leather folder. He fished it out and ran a pudgy finger along the column to "4.35 a.m." Then he slipped the folder back into his pocket.

"Reckon it's a test?" he asked solemnly.

"No, it's no test," Kell declared. "Dan Ridlon's been asleep when he cleared us as Number 46, and we've all been asleep while we ran this train forty miles on track we had no rights over."

They backed into Bogfield and the engineer and conductor went into the office together. The operator came alive just as they walked through the door. He looked up with a sheepish grin, but he didn't say anything.

Kell said, "I want to talk to Ridlon."

"Okay. Help yourself." The operator shoved the telephone toward him.

Kell listened. The wire was silent. He rang the dispatcher. When Ridlon answered, and asked what was wanted, he said:

"This is Kell speaking."

"Kell! Where are you!" Ridlon had not waked up yet.

"I'm in the clear at Bogfield."

"What in the devil are you doing there?"

"Waiting for orders."

Kell heard the dispatcher moving papers and breathing into the transmitter. One breath was cut squarely off and finished seconds later as a long-drawn exhalation. Pretty soon Ridlon said:

"All right. I'll fix you to run extra out of there. Put the operator on the line."

Kell shoved the phone back to the operator. Ridlon sent the order: "Eng. 672 run extra Bogfield to Oldham. Has right over Number 45, eng. 694, to Bannon. Has right over Number 61, eng. unknown, to Oldham."

THE crew didn't eat lunch in the new coffee shop in Bannon that night. In fact, the crew did not eat a lunch anywhere, because they did not feel like eating. A freight train may wander at will through the yards, but the men running it are heading for plenty of trouble when it goes out on the main line with neither timetable rights nor train orders. They had run forty miles with neither. Only the fact that there were no extras on the line prevented a head-on collision.

There was no earthly excuse to cover their blunder, even if they had been

inclined to do so. They rode the passenger train home from Oldham that afternoon and reported to the superintendent's office to take their punishment.

Superintendent Webber was there, and Trainmaster Short. They had before them the dispatcher's report, and the one Kell had wired in from Bannon. The officials read the reports to the men and asked for changes or corrections. There were none, because both Dispatcher Ridlon and Conductor Kell had given full details. There were questions from the officials, but few replies from the men because they were questions which could not be answered.

The men were in a tight spot. Nor was it easy for the officials. Dan Ridlon and Darby Gann ranked but a step below "Trainmaster" Kell in official esteem. This was the first serious blunder either of them had made in fifteen years. Officials take no delight in discharging good men, even for cause, for good men are hard to replace. And when there has been the intimate personal association between official and employe that there had been between Kell and Mr. Webber, their duty becomes doubly painful.

Mr. Short declared himself wholly at a loss to understand why men of their experience and precedent should slip into a childish blunder such as they had committed. Superintendent Webber, checking chief responsibility to the conductor, said bitterly:

"I am utterly amazed at you, Mr. Kell." The conductor flinched. "Why on earth didn't you read that timecard instead of folding it up and sticking it into your pocket?"

Kell had no alibi. He admitted his blunder and said he was ready to face the decision. Mr. Webber sent the culprits from the office, while he and the trainmaster remained behind closed doors.

Occasional snatches of their talk filtered through to the men waiting outside. There was talk of excellent previous records; there was talk of the dangerous precedent of retaining men who mishandled train orders; there was mention of Dan Ridlon's long years of faithful service and the pension almost due, and of Darby Gann's early blunder. But it was Kell's name which was oftenest on the official tongue; and when Mr. Webber spoke it, there was in his tone a note of bitter disappointment, almost of resentment, as if he thought Kell had deliberately fallen down on him.

The accused were ready for the worst when the trainmaster opened the door and ushered them into the official presence. The super's face was a study in indecision. It was the face of a man about to break a precedent as old as the railroad trains and written orders. But indecision vanished when he leaned back in the chair to announce the verdict.

"Gentlemen," he said, "the blunder you made last night is one for which I can see no excuse. Why you failed to make use of the timecard, I shall never understand. Nevertheless, in view of the spotless record maintained by most of you, we have determined to assess each man with fifty demerit marks instead of discharging anybody."

HEAVY soles scraped the floor. Eyes brightened with an emotion deeper than gratitude. Darby Gann and Dan Ridlon cleared their throats. Kell glanced up at the superintendent and murmured: "Thank you, Mr. Webber!"

"Is this disposal of the case satis-

factory to all of you?" Mr. Webber glanced around the ring of solemn faces.

Dan Ridlon answered: "It is more than satisfactory, Mr. Webber." And the others nodded assent.

"Very well, gentlemen," he concluded with a gesture of finality. "The case is closed. Mr. Kell, may I see you for a moment, alone?"

The others filed out and the official followed them to the door. The young conductor braced himself against the shock of a world tumbling in ruins about him, a world built of dreams which he had striven fifteen years to make come true.

Mr. Webber closed the door and returned to stand with a foot on his chair and both hands clasped about the knee. Thus he remained for many seconds. At length he said:

"Well, young man, that knocks the wheels from under one perfect plan."

"I figured it would," Kell responded glumly. The official said, "Humph!" and nothing more for five minutes. He was as much aware as Kell or anyone else that the conductor's fall from the car on New Year's Eve was a big factor in the lapse of efficiency which had led to his latest blunder.

Then Mr. Webber spoke confidentially. "Martin, would you heed a word of advice from a friend?"

"If it is possible, sir."

"Very well. It is this. Don't go back to work tomorrow. Do what you should have done the first of February. Take a leave of absence. Go west, or east, or north or south. It makes no difference which. But concentrate in building up your health. When you can return to work with your old vigor and enthusiasm, come home. What do you think?"

Kell nodded agreement.

"Under the circumstances," Mr. Webber went on, "I shall, of course, use another man on this assistant trainmaster job. But remember that Opportunity keeps knocking at the door where Efficiency resides. Next year, or the next, or some other year, she will call again on you."

Martin heeded the advice. He and Mrs. Kell took the train next night for California. The conductor really relaxed for the first time in fifteen years. He fished in the ocean and bathed in the surf. He hired a spinal specialist to work on his backbone and straighten the kinks he had put into it that night he had plummeted off the stock car roof.

In June he returned home and went running a train. He had shoulders back and his head up, and was speculating on how soon he'd get another chance.

Outwardly it appeared then that his chances at home were exceedingly slim. Mr. Webber, as if in fulfillment of George Sheppard's earlier prediction as to the proper way to become a trainmaster, had appointed Jack Brinkley to the assistant's position.

Brinkley was a young trainmaster's clerk from another subdivision. He, like Kell, was ambitious and obsessed with the belief that he was destined for higher things. But unlike Kell, he knew nothing about running trains, and did not consider it worth while to learn such things as the proper way to throw a switch or couple an airhose.

But he was a whizz of a trainmaster's clerk. Pop Short very quickly discovered that fact. When Kell came home, Brinkley was in the office, and Pop was out rawhiding around over the road keeping trainmen on their toes. Apparently the arrangement was highly satisfactory. Not a ripple stirred the surface of the official pool.

OIL was booming. The TO&E was getting two hundred cars of refinery products a day into Bannon and working several crews on the branch lines. Soon after Kell's return, he bumped the conductor and took the Green River turn-around, hauling empty oil tanks into the field and bringing the loads back.

Green River was the hub of the oil industry and the biggest town in the field. It was the center of a forest of derricks, acres of huge storage tanks, and big refineries and new wells drilling. The TO&E kept a switch engine on duty there three eight-hour shifts a day, distributing the cars Kell brought up among the commercial and refinery spurs, and collecting them for him and his crew to take back into Bannon. These switch crews, each in charge of a footboard yardmaster and engine foreman, worked under and reported to the trainmaster's office in Stringfield.

When business picked up the daylight crew went making overtime, an hour or so a day at first. Nothing much was said about it. Officials expected a little overtime on the daylight switching job at Green River, because the men had miles of trackage to cover. But when time slips came in with three and four hours a day, Pop Short said something had to be done about it.

He ordered his assistant out to Green River to jazz up the crew and eliminate that overtime. Jack Brinkley tried Pop's scheme the first day, followed the men around bellowing orders at them; but they didn't jump for him like they did for Pop. They made six hours overtime that day instead of four. The second morning, Brinkley looked on and tried to analyze the situation. He decided that one cause of overtime was the engineer taking too leisurely a pace running into and through the spurs and branches.

"Widen on that old mill and walk her along," he bellowed to "Fats" Walton, the elderly hogger.

"These tracks won't stand speed," Fats averred. "We'll put this hog on the ground as sure as we go speeding her up."

"They'll stand a helluva lot more speed than you're using, Walton. Quit your loafing along trying to make overtime, and move this engine, or we'll put a man on it that will."

That was noon the second day. Fats took his time the next few moves. The assistant grew hot under the collar. He hopped the footboard and went giving signals. By this time he had learned the difference between a *back-up* sign and a *go-ahead,* and could tell sometimes by looking at them whether the switch points were set for or against a track.

Brinkley stayed right with them. When a switchman gave a signal, he promptly relayed it to the hogger with a flourish that called for speed. Old Fats would stick his tongue in his cheek, kick the reverse into the corner, pull out the latch and send the little switcher reeling over the iron. The men all knew they were heading for the ground, even if their young boss didn't. It happened in the middle of the afternoon.

THE TO&E came into Green River from the east. The three-track yard was directly south from the business section of the city and between it and the river. Most of the commercial tracks left the main line either east of or near the east end of this yard. The main line continued to the west edge of town, the up-river edge where it divided into three spur tracks.

The left one went through a wire enclosure into the plant of the Green River Oil Company, which was controlled by Martin's Uncle Henderson and where Martin himself had worked more than fifteen years before. Martin might have built up a successful career for himself at that plant; he might have become a big shot in the oil industry. But Martin preferred rails. He had made his choice and he never regretted it, not even when he was smarting under the discipline imposed as a result of his own blunders.

Two hundred feet west of the Green River Oil switch the TO&E line branched again. The right-hand branch was the Sandhill spur. It crossed the sandhills to a second refinery. The left one, the River spur, crossed the same draw and followed the river for five miles to a still third plant.

At 3.10, Fats Walton and his crew finished switching the Green River Oil plant and started to make up Kell's train. Kell was almost due in town then. They had brought fifteen cars of gasoline out of the sandhills and left them on the spur. They had switched the River and the Green River Oil spurs and had kicked nineteen up the River spur. They spotted their empties at the plant, headed into the main, and started back to pick up the two cuts of oil and take to the yards to put into Kell's train.

Jack Brinkley had been bellowing all afternoon and the whole crew were sore at him, but they weren't running. The engine herder nonchalantly closed the switch, hopped the footboard and gave a *come-on* sign. Brinkley was on the other end, on the engineer's side. His face was smeared with soot and grease until he looked like a bum.

"Which cars will you pick up first?" he asked the foreman.

"The Sandhill cut, of course," the other said. "They're the short cut."

Brinkley leaned around the end of the tank and gave a wild highball. The fat engineer braced his foot against the boiler head, yanked the reverse into the back corner, and came blaring through the switch. Tank wheels screamed as they took the turn-out and screamed again as they rattled through the frog. Then, without warning, the rails spread. Before any of them even had time to think, the tank and all the drivers were off the rail and were hopping along the ties.

Martin Kell entered the picture just then, while the experienced switch crew were solemnly assuring their young boss that it would be impossible to rerail the engine without calling the big hook. Engineer Gann had pulled the fifty empty oil tanks into the yard and stopped.

Kell was walking up to the head end to see when his train would be ready for him to take back. He saw the yard goat in trouble, saw it tangled up with the Sandhill spur, and guessed what had caused it. He knew those spurs were in bad shape, and that a bulletin was out forbidding the heavy road engines from using them. Gann came down from the cab and they commented caustically on the young assistant trainmaster who had come to town to show the old head switchman how to make up trains in short time.

"I guess we'd better go down and give them a pull," Kell reckoned.

"Not now," growled the engineer. "Let 'em sweat. I want a cup of Java and a sandwich before I go rawhiding around in the heat."

BUT Darby did not get time for his Java and sandwich. There was a drill rig working a little distance up

the draw and directly north of the spot where the yard goat was derailed. It had been working there all summer, and the boys had heard the drillers saying yesterday the well would come in soon.

Several wells in the Green River field had come in as gushers. Good oil had been wasted before they had been brought under control. The owners of this one were using precautions; but somebody must have slipped, for while Gann and Kell were discussing the relative merits of raisin pie and ham sandwich, there came a commotion from up toward the well.

Somebody yelled. Before the echo of the yell died, it was followed by a roar and the clatter of a string of tools going out through the top of the rig. While the two men watched, an expanding black column rose high in the air, to fall back upon the sloping sides of the draw in a rain of rushing oil.

Kell sensed disastrous possibilities for the TO&E in that gusher. There was a steam engine housed in a shed a bit south of the well, with a coal fire going in it, and the wind was gently wafting the black rain toward its smoking stack. Kell ordered the head brakeman to cut the engine loose from the train. Gann went into the cab faster than he had come out of it. Kell lined the switch, and they roared down to the Green River Oil Company refinery.

As the engineer set his brake to stop clear of the switch, the spouting column of oil changed suddenly into a spiraling cloud of smoke, all black like tar and tinged and bordered with red tongues of flame shooting up and leaping south over the tracks of the TO&E and the refinery beyond.

Kell took in the situation as he leaped off the locomotive. The railroaders had now backed away from their engine to watch the sweep of the fire. The burning gusher was about four hundred feet, maybe a little more, from the railroad tracks. The low dike built across the draw between the tracks and the well was rapidly filling with liquid fire. The yard goat was smeared all over the railroad, fouling both tracks and blocking half a train of gasoline behind her. And the cars themselves, fifteen on the north spur, nineteen on the south, stood less than two hundred feet from the buildings of the G.R.O. Company plant.

Forgetting for the moment that he was not a trainmaster, Kell asked caustically:

"Why don't you fellows get that engine out of there? Are you going to stand around here and let her burn up?"

"We can't get her out," yelled Brinkley. "We can't rerail her without the wrecking crane."

Kell shot a keen glance at the footboard yardmaster and his men; experienced fellows, all of them, who had rerailed plenty of wheels worse off the iron than these were. He gathered that there had been a conflict of authority, and that they were not offering helpful advice to their young superior.

He said: "When that smoke clears, set your frogs, fellows. I'll bring my engine in and give you a pull."

"You'll do nothing of the sort," the young official said importantly. "You'll get that engine on the ground and burn her up, too."

FOR a second, Kell, jealously recalling that young Brinkley was holding *his* job, was tempted to go back to town and let her burn. Then

he estimated the loss to the TO&E. A twenty-thousand-dollar yard goat. Thirty-odd tank cars worth two or three thousand apiece. A quarter of a million gallons of gasoline, mostly the property of his wealthy uncle.

"I won't put my engine into the spur," he growled. "I'll reach in with a string of empty tank cars—"

"I won't permit it, sir."

"Okay. You're the trainmaster's assistant. I'm not. Come on, Gann. Let's go to town. We might get our engine burned up fooling around here."

Kell headed for the locomotive, but he met the manager of the Texas Oil Company running across the tracks.

"When are you fellows going to move those gasoline cars?" the oil man demanded.

"Ask somebody that knows." Kell jerked a thumb toward the assistant trainmaster.

The oil man rushed on and put his question to Brinkley. Kell sauntered back and listened to the argument. The Green River Oil Company was the TO&E's best customer. The manager insisted they move their cars at once.

"If you don't," he declared, "that fire's coming right down this draw. These tanks will blow up and spray liquid fire all over our plant. If you can move these cars and keep them from exploding, we'll build a dam against this north track and hold back the oil until we can get set to protect ourselves."

Brinkley pleaded for the derailed engine.

"Put her back on the iron!" the official bellowed. "Do something! For heaven's sake, don't stand around here crying!"

"But the fire's sweeping right over the tanks now. They'll blow up and kill somebody."

"They won't blow up for a long time," Kell cut in. "If we'll all pitch in and work fast and work together, we've got a chance to get them out."

The oil man supported Kell. Brinkley backed down and told him to go ahead.

"But don't you get that other engine on the ground and wreck her, too," he warned. "This fire's going to cost us enough as it is."

The men knew "Trainmaster" Kell, though Brinkley didn't, and immediately accepted his leadership.

"Gann," he ordered. "You go back to your engine. Throw down those two big frogs for us to use. Shorty," to the brakeman, "you cut off twenty-five of those empty cars, shove them into Number 3 track, run around them, and bring them down here."

"With the engine on the other end?"

"Absolutely! I want them to use for an arm to reach in and grab this yard goat and gasoline."

Martin's two men sprinted away. He sent two switchmen for the rerailing frogs. They had been soldiering on Brinkley, but they didn't soldier on Kell. They moved. He called the section foreman, a middle-aged Italian with head as bare as a billiard ball.

"Tony," he asked, "have you got a piece of rail handy—a piece say ten or fifteen feet long?"

"Sure."

"We need it. Send your boys for it and the tools and you come with me."

THE whole world was now on fire. Not only the well itself, but oil which had collected in the draw was burning. The variable northeast wind had stiffened. Smoke billowed into the sky and rolled along the earth. When the wind blew north, it enveloped the engine and tank in deadly smoke and

gasses. When it blew east, the smoke moved west and went behind the engine.

The heat was blistering. Kell and Tony watched their chance. When the wind shifted east, they dashed in and Kell pointed out a spot in the track east of the drivers.

"Spike that piece of rail here," he instructed. "Angle it toward the track so it'll act as a guard rail and force the wheels to the track when we pull. Savvy?"

"I savvy."

"Okay. Go to work! We'll spike down the frogs when the boys come."

The switchman brought the frogs. Kell placed them. The men grabbed hammers and spiked them to the ties. Twice the wind shoved strangling smoke in to drive them back, but when the wind shifted, they came again.

Kell's crew switched out the twenty-five tanks. The footboard yardmaster helped them. He rode the rear end to the Green River Oil switch. The switch engineer went into the cab to handle his brakes when Gann went pulling.

Martin and the yardmaster watched the derailed wheels move slowly forward. The first pair climbed the frog and dropped off it to the rail. The others followed like sheep into a pen. When the last one struck the iron, Kell signalled away, and the yardmaster rode the empty tanks out to help get his engine into the G.R.O. Company spur.

They were gone four minutes. Wind whipped north. The roaring blast drove low over the tanks of gasoline.

"They're gone!" groaned the oil man. "That will set them off."

"They're not gone," Kell denied.

His arm of empty tanks came back. He stopped Gann at the edge of the smoke screen and set the coupler. He had already set the one on the head end of the cut of loads. He signalled, "Back! Easy! Back!" The engineer moved gently, for he knew those tanks were hot and full.

Cars touched. Bumpers clicked. Kell signalled ahead. Gann moved, but when the empties came out they did not bring the loads, for a coupler had failed to fall. Kell tried again and failed. When he was reaching in the third time, the wind shifted. The smoke cleared. The cars were smoking hot. The paint on the north side was scorched, the running boards were blazing.

"Let 'em go!" ordered Brinkley. "They'll blow up and kill you!"

But Kell signalled back. He dashed in to make the coupling. This time the pin fell, and he signalled out. In another minute the fifteen cars which constituted the greatest menace were beyond reach of the fire. The yardmaster had him shove them into the stock track and set a switchman putting out the fire with a hog hose. Kell brought his groping army of empty tanks in once more, and caught the cut off the river spur. The switch crew followed him uptown with their yard goat, and the railroad's work was done.

MARTIN'S uncle came on the scene then, and the refinery took over the fight. Kell coupled up his train and returned to Bannon. The story of his exploits had preceded him. It had grown in the telling. According to rumor, he had saved the whole town of Green River from destruction, crowning himself with glory.

The story must have gone on to Stringfield, for Mr. Webber called him into the office the following morning.

"I understand, sir," the official murmured, "you had quite a fire in Green River yesterday."

"Yes, quite."

"Your uncle down at the oil plant wired me commending you for your work in protecting their plant. He said that except for your management, they would doubtless have lost the entire property."

"Uncle Henderson is an old tightwad," said Martin. "The fact is, I wasn't even thinking of his oil plant. The TO&E had thirty-odd tank cars and a perfectly good yard engine in danger. I didn't want to see them burn up."

"Commendable interest, Mr. Kell," the super growled. "The last time you were here for conference, I assessed you with fifty demerits for lack of interest in your duty. Remember?"

"I certainly do."

The official beamed. "And now I am crediting you with sixty for the work you did yesterday at Green River."

"So that wipes the slate clean?"

"In every respect, Mr. Kell; in every respect."

The super played with a sheet of office stationery, held the corner between his thumb and fore finger, and flicked it across the polished desk."

"Mr. Brinkley left this in the office this morning, Mr. Kell."

The conductor glanced at the sheet. It was Jack Brinkley's resignation of his position as assistant trainmaster.

"Jack likes to write letters," Mr. Webber continued, chuckling, "and he doesn't mind checking tonnage and train orders; but when it comes to analyzing oil-field switching and discovering why the crew makes four hours overtime instead of one—"

Martin's pulse throbbed. He was not quite sure afterward what he said, but he thought it was: "That's too bad, Mr. Webber!"

The super stood up and looked at his watch. Kell stood up and looked at the super. The latter's keen eyes were twinkling, and a smile crinkled the corners of the hard mouth.

"What about it?" he asked. "Would you put the pep into those oil-field switchmen, or fire them for loafing on the job?"

"I might." Martin grinned to think how they had stepped for him yesterday.

"Good! Pack your grip and get ready to ride Number 8 out of here. You'll be the new assistant trainmaster at Green River."

Conducted by DAVID MARSHALL

Semaphore and Searchlight Signals

AT FIRST the semaphore was an instrument of overland telegraphy, back in the days before the invention of the electric telegraph. It was borrowed and placed in railroad service, as a wayside signal, in England in 1841; and fourteen or fifteen years later it was introduced in the United States. It was here before the block system. It saw the rise and fall of perhaps a score of rivals—ball signals, vane signals, banjo signals, Hall signals and all the rest. And only now has it entered the twilight of its quite remarkable history.

Indeed, there was never an alternative to the grand old semaphore till science was able to produce an electric light so powerful that, with little shading from the sun, it could be seen at a great distance by broad daylight. Thus it was 1908 before the color-light signal was developed.

Then in 1915 came the position-light signal, now standard on the Pennsylvania Railroad: and in 1921 came the color-position lights such as are used today on the B&O. One and all, they cost a great deal more to operate than semaphores, but they also cost a great deal less to maintain—for the beauty of a light signal is that it has no moving parts exposed to the weather.

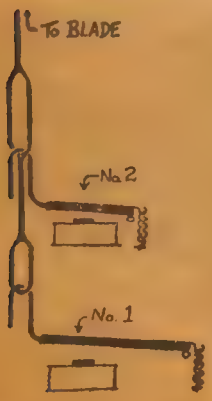


Diagram Showing How No. 1 and No. 2 Solenoids Are Hooked Onto the Pull-Wire Which Operates a Model Semaphore (See Page 114). The Armature of No. 1 Travels Exactly Twice as Far as That of No. 2. When No. 1 Is Actuated, the Blade Is Pulled All the Way to Horizontal Position. When No. 2 Alone Is Actuated, It Is Pulled Only as Far as 45-Degree Position. The Two Solenoids May Work Separately. No. 1 Will Always Prevail Over No. 2

Newest of all the light signals, and possibly the most interesting to us, is the searchlight signal, which many old-time railroaders look upon as only a Hall signal resurrected from the grave and lighted up.

M. E. Smith, recording secretary of the New York Society of Model Engineers, has developed for model railroad use the trickiest automatic searchlight signal we have yet seen. It's a three-indication signal, and though the bulb is only a six-volt affair, it throws a beam—red, yellow, or green—which is readily visible at 110 feet, one scale mile. (*See page 113.*)

We are also setting before you this month a method of hooking up semaphores so that, when tied into the track circuit described here last month, they will operate as automatic block signals.

Where each type fits in best is another question; and before we pass on to a description of the moving parts, it may be worth our while to take a brief glance at this problem. The semaphore mostly belonged to the golden age of steam railroading; while in a very special way, light signals belong to the new dispensation—to the reign of electricity.

One of the highest rules of good model railroading is to avoid everything freakish or improbable; and one can scarcely deny that there is at least a greater appropri-

ateness in using semaphores where steam-type locomotives operate and reserving the searchlights for electrified divisions.

This can be taken as a safe rule of procedure: Use modern devices on a rich and well-maintained main line, and good old-fashioned semaphores, among other things, on a branch line or the main of a not-too-prosperous company.

THE SEARCHLIGHT TYPE we will consider first. In actual railroad practice a searchlight signal is composed of a black, circular target mounted on a mast or signal bridge. At the center of the target is a large lense of colorless glass; a lense which is usually eight and three-quarter inches in diameter. Directly back of the lens is a cheese-box housing in which the light, the relays, and all the working parts are enclosed. A reflector bunches the rays of light, and directs them in a beam through the lense.

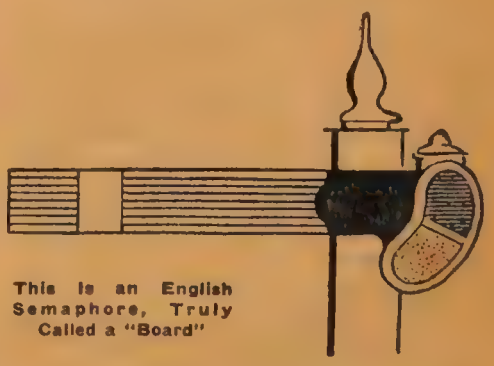
Before reaching the lens, however, the beam is intercepted by, and passes through, a filter of colored glass; and the function of the relays is to pull the correct color-filter into position in response to the impulses received from the track circuit. The filters are more generally called "roundels." All three as a rule, are mounted on a fan-shaped frame which wags like the spectacle of a semaphore.

And as a matter of fact, the fan of a searchlight signal is nothing but a housed-in semaphore. When the block is occupied, it tumbles to the *Stop* position—and the red roundel is where the beam must pass through it. Similarly, the frame is lifted one way to indicate *Caution*, or the other way to give the *Clear* indication.

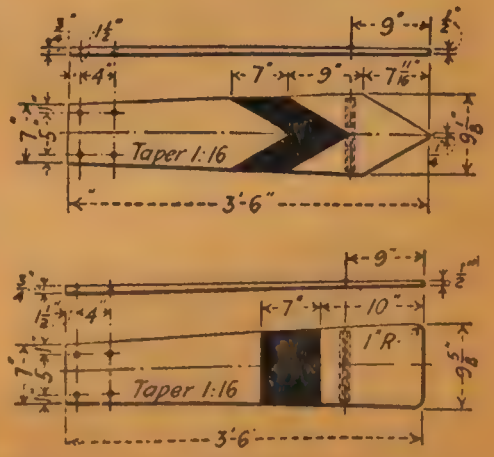
In developing this type of light signal for model railroad use, Mr. Smith of the New York Society has placed the light and all the working parts below the "ground." The cheese-box is there at the back of the target, compact and tiny, like the prototype. But the model cheese-box is open at the bottom, and it has within it merely a reflector tilted forward at an angle of forty-five degrees. The reflector receives a vertical beam of light from the ground and sends it off horizontally through the lens in the target.

It goes without saying, of course, that directly below the reflector there's a tiny hole in the "concrete" in which the signal mast is set. This hole serves of itself alone to create a shaft of light sharp enough to enter the cheese-box without spilling too much of itself around the edges. No reflector is used below the light to send the rays upward, and no housing is used to enclose the light. (The surface of the table-work should be light-proof anyhow; and by leaving the lights uncovered, you make it possible to tell, by a single, sweeping glance below the table, which bulbs are lighted and which are not.)

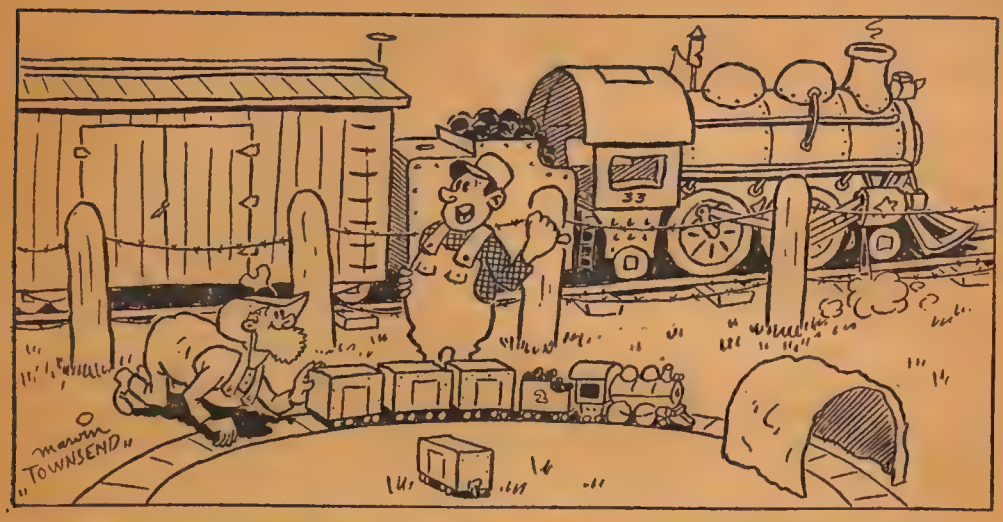
"Underground," the working parts are



This is an English Semaphore, Truly Called a "Board"



And Here Is the More Shapely American "Blade." The Dimensions Are Those Agreed Upon by the A.A.R.



"I'd Like to Stay Longer and Play with Your Train, but I Gotta Get Back on the Job"

located on a hanging el which is made up, in Mr. Smith's model, of steel parts securely bolted together; and bolted at the top to the steel piece in which the light-hole is drilled and into which the signal mast is screwed. The mast is of round brass, threaded at the lower end.

The operating items are these: (1) An electric light socket and bulb, of flash-light size; (2) A pair of solenoids, or electro-magnets, which operate on separate circuits; (3) A pair of coil springs, and (4) A rocker, pivoted above and between the two magnets.

The rocker is composed mainly of the two armatures which hover above the magnets. At their common pivot the armatures are riveted together, rigidly, to form a kind of elbow 168 degrees wide. And the rocker is completed by a steel ribbon, half an inch wide, which forms an arc above the pivot from the outer end of one armature to the outer end of the other.

The whole rocker tips back and forth as one magnet or the other is energized; or else it is held by the springs in dead center. And because electricity costs money—because, further, an inexpensive magnet too long energized gets overheated—dead center must be, of course, the rocker's normal position.

The steel ribbon is perforated at three points. The first hole is cut at the mid-point of the arc, and covered over with green celophane. Two other holes are cut, one at either side of the middle, and the one is covered with red and the other with yellow celophane. These three are the roundels, and the steel ribbon mounted on a rocker takes the place of the fan-shaped frame of a real searchlight signal.

The electric light socket is set in a bracket above and to one side of the magnets; and out of the socket the bulb reaches into the wide open middle section of the rocker. (And thus the bulb is accessible and easily renewable.)

The adjustments to be made are these: The reflector back of the target lense must be directly over the light-hole in the "concrete" base of the signal; the roundels must ride back and forth directly under the light-hole; and the filament of the bulb must likewise be directly under the light-hole. In other words, the reflector, the hole and the source of light must all be in a straight line which is intercepted by one or another of the roundels.

Then, when the light is on, and the rocker is in its normal position at dead center, a green light will shine from the target lense—the *Clear* indication.

But now suppose a train enters the block. We recall from last month two things: The train closes the open track circuit, and the current, which thereupon starts flowing, energizes the track relay, causing the armature thereof to freeze to the poles. And that movement in the track relay governs the local circuits which control our searchlight signal.

Actually, the track relay must be designed so that when it is energized it will break one signal circuit and close two others. First it will close the circuit of our No. 1 solenoid; the rocker tips instantly to No. 1, the red roundel rolls to the top position, and a red light gleams from the target—the *Stop* indication.

But the track relay also closed another signal circuit. This, if not broken at the other end, energizes the No. 2 solenoid at the first signal in advance of ours—the last signal, that is to say, which the train had had to pass before arriving at ours. What happened at the advance signal, however, we can overlook for the moment, for it is presently to happen here.

And finally the track relay broke the circuit connecting with our No. 2 solenoid.

So far as anyone facing our signal could tell, however, only one thing had happened: our searchlight turned red.

Now see what happens when the train leaves our block and enters the next block ahead of it—which is called the block to the rear of us, since signals face in the direction opposite to that of the train. As soon as the train is wholly out of our block, the track relay at our signal springs back to the normal position; and, among other things, the circuit of our No. 1 solenoid is broken, and the circuit of our No. 2 solenoid is closed again at this end. And, because the track relay at the first signal to the rear of us is energized, the circuit of our No. 2 solenoid is closed at that end also. With both gaps closed, our No. 2 is energized; the rocker has tipped over to that side, the yellow roundel has rolled into position, and a yellow beam is pouring out—the *Caution* indication.

Complicated? Not at all. If you wish

Automatic Searchlight Signal Developed by M. E. Smith of the New York Society

to make your searchlight a simple two-indication signal, you'll need only one solenoid and two roundels, red and green. And then you can omit the track relay entirely, using the track circuit, instead of a local circuit, to energize the solenoid when the block is occupied.

To have a three-indication signal, you simply add the extra solenoid—the No. 2 solenoid—to tip the rocker the other way when the block to the rear of ours is occupied. And except for one thing, the No. 2 solenoid could be connected in parallel with No. 1 to the rear of us, so that whenever his No. 1 was energized, our No. 2 would be energized also.

The one thing that prevents so simple a tie-up as that can be easily demonstrated. Let us suppose, for example, that the block to the rear of ours was occupied. Then our No. 2 solenoid would be energized, and our signal would be gleaming yellow. In the face of the *Caution* signal, then, suppose a train should enter our block, as the engineer would have a perfect right to enter it. Right away, track circuits being what they are, our No. 1 solenoid would be energized. But what would happen? Probably nothing at all.

This Semaphore (Patented in 1884) Was Procured for the Canadian Railroad Historical Ass'n by C. L. Terroux, 48 Rutland Road, St. Lambert, Que., from the Quebec, Montreal & Southern Ry., a Subsidiary of the Delaware & Hudson. It Was Used on the QM&S Crossover with the Central Vermont Ry. at Rougemont, Que.

Certainly if the solenoids were equal and the voltages were equal, No. 1 would never pull the rocker away from No. 2. And so the signal would continue yellow when it should have turned to red.

And that is why we introduce that simple additional device by which our track relay breaks the circuit of our No. 2 solenoid the moment a train enters our block.

WE NOW come to semaphores. Mast, blade and spectacle—a semaphore can be ungainly or one of the most beautiful things about a railroad. In general, U. S. and Canadian semaphores are far more graceful than the English. But our model railroaders seem to have adopted the clumsy English blades as prototypes.

When used in the upper quadrant, American blades are three and a half feet long; those in the lower are four and a half. But all alike are tapered. All are seven inches wide at the mast, and between nine and ten inches at the outer edge, depending on their length. The blades also are beveled, sloping slightly to the edges from a high ridge along the longitudinal center line.

In the case of semaphores, the solenoids are tied into the track circuit directly, without the use of a track relay and without any circuit-breakers. No. 1 is tied in directly to the rails of our block, and No. 2 is connected in parallel with No. 1 to the rear of us. And the armatures pull the wires which operate the blade.

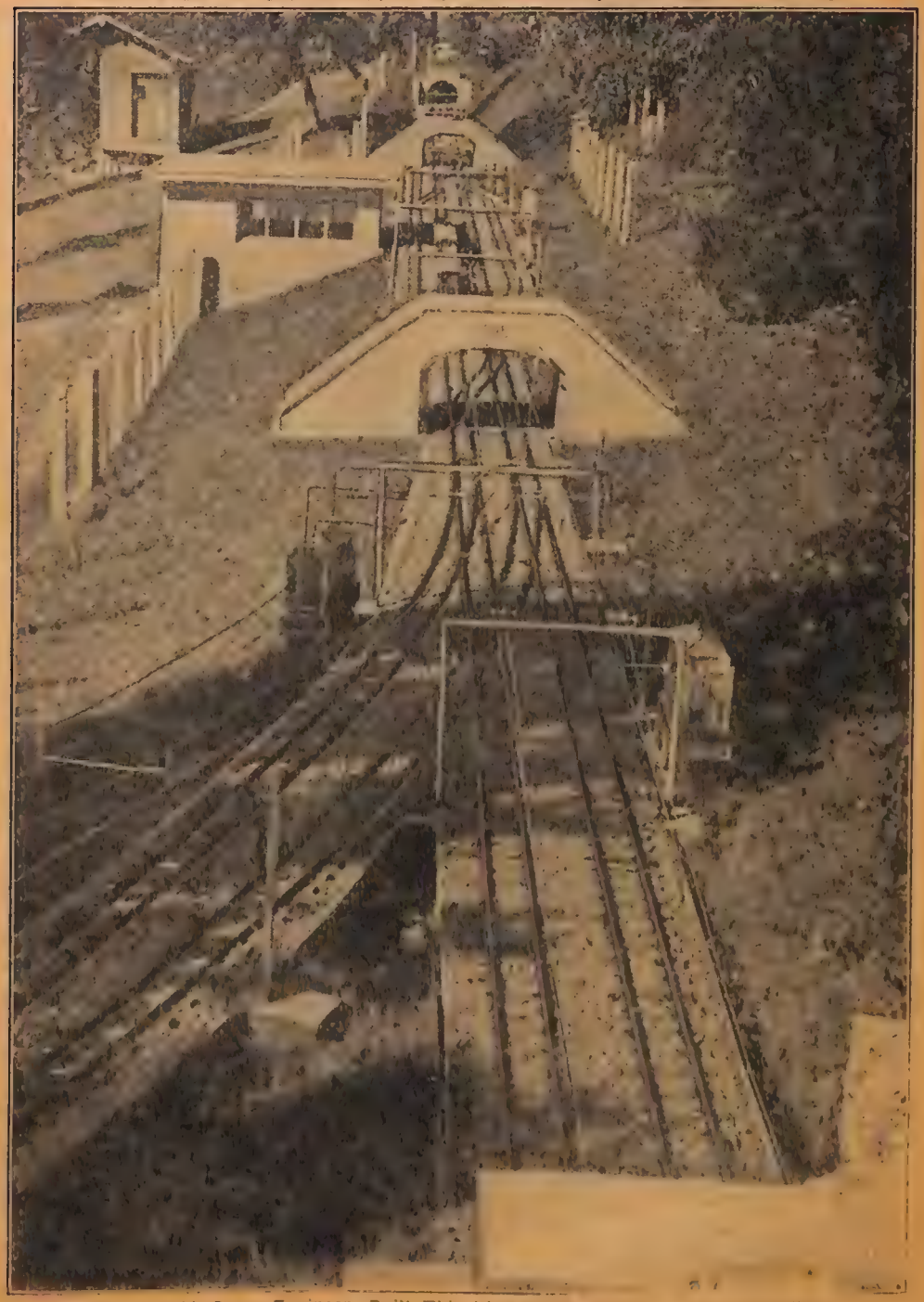
The apparatus is exceedingly simple, and obvious enough from the drawing to require no description here. Just this hint is necessary: Your No. 1 solenoid is adjusted so that its armature travels far enough to pull the blade from the *Clear* to the *Stop* indication; and your No. 2 solenoid is adjusted so that its armature travels only half as far. Thus the No. 2 armature pulls the blade only half way to the *Stop* position—leaving it at *Caution*.

* * *

NEXT MONTH: "Organize the Operating Personnel of your Model Road."

Miniature Railway at Lucerne, Switzerland

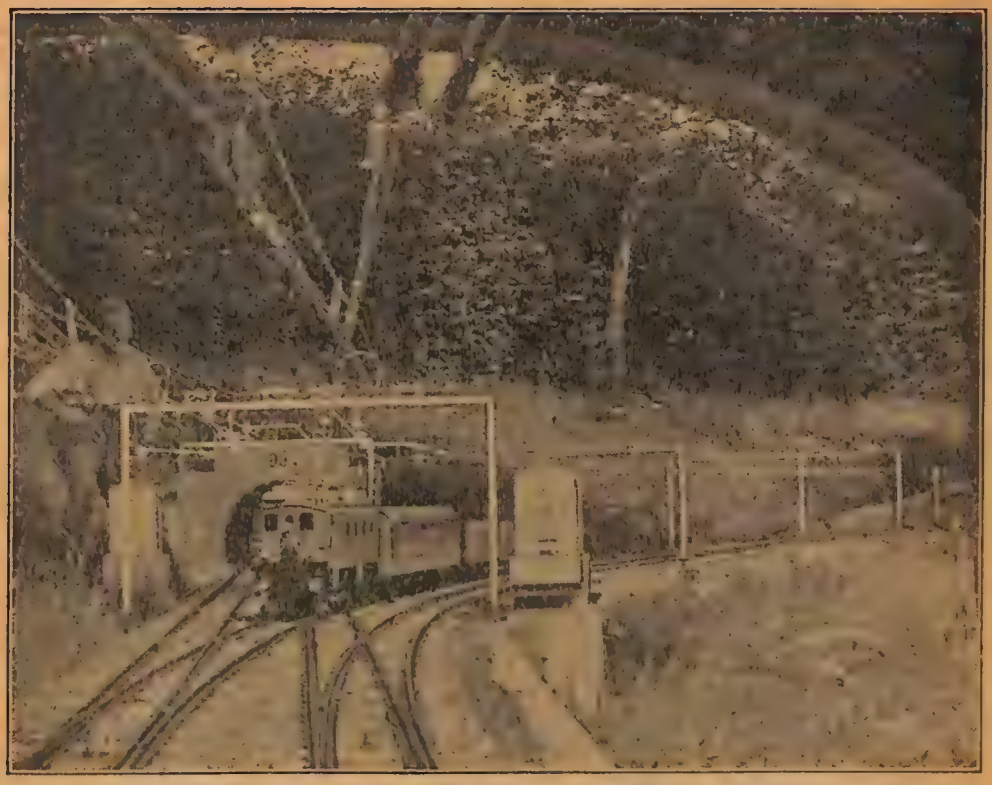
(Five photos by M. A. Wyss, Lucerne; from Information Bureau of Switzerland, New York City)



Arthur Oswald, Swiss Engineer, Built This Line at His Home on the Dietschiberg

Mr. Oswald at His Remote-Control Board. He Created This Miniature Electrified System as a Perfect Replica of Swiss Federal Railways, One-Tenth Size, Not as a Toy, but to Experiment on Remote Starting, Steering, Stopping and Other Technical Problems of Standard Operation

The Photographer Laid Gloves and a Cigarette Package on the Well-Ballasted Track to Show Its Size. Rails Are "Spiked" to Ties with 12,000 Screws



The Road Is Double-Tracked for 560 Feet; Some Sections Are Four-Tracked. Even the Powerful Locomotive Was Built by Mr. Oswald

By Lying Flat on a Car, Engineer Oswald Can Ride Through His Tunnels

Model Engineers and Clubs

NEWS from Washington indicates that the model railroad industry may eventually play a part in America's vast program of unobtrusive and unprovocative armament. Model railroading itself is viewed as a source of training calculated to produce large numbers of men skilled in fine and delicately accurate craftsmanship; men whose services would become available, should the need arise, to half a dozen distinct and separate war industries.

It seems the model manufacturers also have a definite task laid out. In peacetime they are to continue adding to their machinery, perfecting new gadgets, and developing skill among an ever-enlarging group of professional and amateur workers. In the event of war—which, of course, is an extremely vague menace to present-day America—the model shops and factories could swing over to the manufacture of minute parts for military equipment.

* * *

AN announcement of more immediate interest concerns the price of steel rails. Those produced by Patterson Bros., 10 Park Row, N. Y. City, from the blueprints of the New York Society of Model Engineers, will sell at $2.75 for 100 feet. These rails, extremely accurate, are for 0 gage pikes. They are appreciably smaller than the ordinary steel rail—and just too small for any but scale trucks; tinplate trucks cannot run over them.

* * *

ONE of the best things that comes to our desk each year is the bound volume of that well-known magazine, *The Model Railroader;* and this time it's better than ever. Vol. 5 contains the twelve issues for 1938, an aggregate of 564 pages of consistently good stuff; a wealth of good photos, useful diagrams and descriptive material, selling at $3 but having a very much higher practical value to model railroaders. It is published by the Modelmaker Corp., 7611 W. State St., Wauwatosa, Wis.

* * *

PACIFIC MODEL RR. ASS'N, including all organized railfans in southern California, announces that its recent annual exhibit was attended by some 10,000 persons, despite a persistent downpour during the three days of the show. High spot was a half-hour radio broadcast. Special short-wave transmissions from the UP *City of Los Angeles* and a UP locomotive of the 3900 class and a caboose were put on the air by the dispatcher's office and the freight office. W. M. Jeffers, UP president, was guest of honor.

* * *

WE now bring to your attention the request of the Lang Model Engineering Co., 902 Bank St., Cincinnati, O., that all decent model railroaders of the United States and Canada join in a search for four stolen photographs, which happen to be the last of their kind showing trolley-cars 1052 and 1135 of the Louisville Railway. The thief is still at large, though a warrant for his arrest has been issued. The photographs measure 8x10 inches, and were cut from the car-builders' own album. The negatives have long since been destroyed.

* * *

N. Y. & NEW ENGLAND CENTRAL RR. (Thomas R. Dunn, 254 Hayward St., Yonkers, N. Y.) has obtained a certificate of convenience and necessity and has begun building a double-O gage line 100 feet in length. The present roster shows two scale freight cars already on wheels, and a dozen or so still in the shops; and one Lionel Hudson-type locomotive rebuilt by Nason for two-rail operation.

* * *

DELAWARE VALLEY RR. CLUB (Roy Harto, sec., 1450 Kaighn Ave., Camden, N. J.) is an HO outfit, newly organized. The club is now operating over tracks leased from the Cedar Valley Lines, at 519 Cedar St., Camden. It is planned, however, to acquire a headquarters of its own and to build, ultimately, a new and extensive pike. Meetings are held every Monday night. Officers: Raymond Parsons, president; Robert Paget, vice pres.; Thomas Clement, treas.

* * *

STANISLAUS SOCIETY OF MODEL RAILROADERS (Alfred Rose, sec-treas., 310 Sycamore Ave., Modesto, Calif.) is another new club. This outfit, too, is of the HO persuasion, and in the first three months of its existence has laid well over 300 feet of track. Members are now at work on a 4-6-6-4 locomotive which will be the property of the club. Operations were begun with a roster of four locomotives, all the property of Clifford Grandt: 0-6-0, 0-4-OT, 2-8-4 and a streamlined Rocket. The club has seven charter members; Alfred McCarthy is president.

* * *

CHANNEL RR. CLUB (Vernon Guess, sec., 1709 Castillo St., Santa Barbara, Calif.) is—wait a minute; the pace is getting too dizzy for us—still another brand new club. And this, too, is a two-rail outfit, but in O gage. (You remember O gage; that *huge* stuff.)

* * *

BALUSTROL & PACIFIC RR. (Cornelius C. Vermeule, 3d., Short Hills, N. J.) reports steady improvement in freight-car loadings but a corresponding loss of passenger traffic. The current roster shows 14 miscellaneous cars, including two crummies and an open-end day coach; also a six-wheeler switcher and an 0-4-0 tank locomotive. This is an orthodox three-rail O gage pike.

* * *

KANSAS CITY MODEL RR. CLUB (W. A. Wood, sec-treas., 401 E. 20th St., Kansas City, Mo.) is about to begin operating trains after more than a year's work in building a layout, O gage. The club, we are notified, meets every Friday at 8 p.m.

* * *

PACIFIC MODEL RAILROADERS (O. F. McKeon, sec., 1167 Rhode Island St., San Francisco) made the mistake of inviting wives, daughters, and sisters to a Sunday afternoon gathering last month. As a "ladies' day" it was a howling success, but as a model railroad meeting it was not so good. Oh, well . . .

* * *

GREAT WESTERN MODEL RR. ENGINEERS (A. B. Aucourt, gen. mgr., 916 24th Ave., Seattle, Wash.) announce the old layout has been torn up after a year's operation. A new one is being built as rapidly as possible, but will not be ready for the inspection of visitors until about April 1. The new layout will use the same catenary system and in addition will be wired for two-rail operation. The roster includes a C&NW 4-8-4 steam type, Class H; four electric locomotives (Pennsy 01C, South Shore steeple cab, Milwaukee switcher and free lance); 35 freight and 5 passenger cars, and a Lackawanna motor unit.

* * *

CINCINNATI and vicinity—Anyone interested in forming a model engineers' club is asked to get in touch with Robert Folsom, 51 Woodsdale St., Hartwell, Cincinnati, O.

* * *

MONTREAL SOCIETY OF MODEL ENGINEERS (Cecil F. Harding, hon. sec.-treas., 6591 Molson St., Rosemount, Montreal, Canada) reports that the attendance at its recent "locomotive night" was so large that "half a dozen members had to remain standing." The prize exhibit was Robert Logan's 3.5-inch gage 4-8-4 locomotive which had been taken apart and lay exposed in its proverbial 101 pieces. At least four months, we understand, will be required to put her together again. The society is looking forward to a record year for locomotive building; and the good old Pacific type seems to be the favorite.

* * *

ELTEE PRIVATE RY. (L. Tingle, Edgecliff, Sydney, Australia) has completed the trackwork of a new "through passenger station with a goods yard and a triangle in lieu of a turntable." Brass rails are employed, all of the British bullhead section; and power is supplied from an outside third rail, the gage is — HO in the United States, 00 in Great Britain and "dublo" in Australia. The Eltee's greatest difficulty is to get rolling stock all of the same wheel-gage as measured between the inside faces of the flanges. This is a widespread problem in Australia, where British, American, and local Australian models jostle one another about on the shop counters, each one pretty much a law unto itself so far as standards go.

The Model Trading Post

FOR SALE OR EXCHANGE

LOCO 700 EW, new, $55; Scalecraft SP type, $50; Mi-loco Hudson, $45; Lionel 763EW, new, with 2223 tender, $27.50; Flying Yankee 267EW, used, $9; Lionel UP, $16; Hiawatha, $15; 6 well-made ¼-in. frt. cars automatic couplers, complete set, $25; 14 ¼-in. frt. cars with cat walk but no ladders or brake wheels, $2 each.—L. M. Blum, 807 Engineers Bldg., Cleveland.

O GAGE eqpmt., including AF loco 3112, 2 baggage cars, pass. car, obs. car, Pullman, NYC gondola, 30 in. bridge and quantity of tinplate track. I want in exchange std.-gage pass. set.—Bruce Springer, Cumberland Center, R.F.D. 1, Me.

* * *

LIONEL Hudson 2763EW, new, $26.50—B. MacAlorney, 44 E. Mine St., Hazleton, Pa.

* * *

OO GAGE boxcar to sell for $1.50 ready made, all die cast, no wood parts.—Edward Mall, 3027 W. 39th Pl., Chicago.

* * *

LIONEL modified Hudson and tender, like new, $17; 8 AF frt. cars, HO gage $1 each. Will trade any or all for OO gage eqpmt.—Thomas Dunn, 254 Hayward St., Yonkers, N. Y.

* * *

LIONEL std.-gage steam type loco and tender 384, cattle car 513, gondola 512, work crane 219, caboose 517, track, r.c. switches, roundhouse and turntable. In exchange, I want ¼-in. scale eqpmt., cars and track; no tinplate.—W. E. Snell, 1540 W. 11th St., Munice, Ind.

* * *

O GAGE track and crossing; also lamp posts, no bulbs. I want O gage loco and tender, $3 cash or what have you.—David Forst, 226 S. Main St., Mayville, Wis.

* * *

O GAGE Lionel 299 streamliner with whistle; AF 1938 Hudson with 4 pass. cars; also misc. accessories, HO reefers, hopper and trucks.—Robert Adams, 496 Sanford Ave., Newark, N. J.

* * *

LOCO chime whistle, and two issues of the *Locomotive Engineers Journal*, July, 1898, and Jan., 1890. I want in exchange loco parts, 1-in. scale, or steam engine.—Lester Pettit, 1520 Fulford St., Kalamazoo, Mich.

* * *

LOG CAR 3216; boxcar 3208, caboose, and track, all new AF eqpmt —Sol Edelson, 429 E. 22d St., Paterson, N. J.

* * *

3/16-IN. scale CGW ten-wheeler, with AC motor; also 3 truck kits and 50 foot track kit. No reasonable offer refused.—H. Hallock, 3027 N. E. Couch St., Portland, Ore.

* * *

BLACK RAIL TRACK with wooden ties, 2 or 3 rail, new, interchangeable with Lionel WR, same cost as tinplate. Also Lionel 253E elec. loco, and other used locos; Ives 1690 and AF pass. cars. I want T or K transformer, 226E or similar loco, AF or Lionel 800 frt. cars.—John Burnham, Box 174, Greeneville, Tenn.

* * *

B&O ¾-in. scale boxcar sides, lettered and scribed, 10c a pair, plus postage.—Dink Caton, 92 E. Depot St., Concord, N. C.

* * *

LIONEL O gage items and model station, church, etc. In exchange I want O gage cars, locos, etc.—Fred H. Reichert, 605 Church St., Hawley, Pa.

* * *

TINPLATE Marx loco & tender, 5 cars, transformer, 1 pair manual switches, 10 curved and 8 str. sections track. What am I offered for the lot?—Walter E. Skinski, 582 High St., Middletown, Conn.

* * *

LIONEL, Ives and Marx trains (3), 7 Ives frt. cars, track, switches, signal lights, gate crossing, depot, homemade roundhouse and turntable, all mounted on two 5 x 5 foot platforms, with r.c. Will sell for $25. I want OO scale models.—Wesley L. Haines, Box 261, Hot Springs, S. D.

* * *

¼-IN. scale track and cars to trade for HO gage eqpmt.—Kenneth C. Sickels, 166 Summit Ave., Phillipsburg, N. J.

* * *

CABOOSE, oil car, wrecker car, flat cars, water tower, all AF; also new 1938 Pennsy Torpedo pass. set 3; Lionel loco 253, whistle and controller, and CP Atlantic type loco. I want in exchange airplane souvenirs or gas model or motors.—John W. Hulme, Box 215, Remus, Mich.

* * *

LIONEL, AF and Ives eqpmt.; track 5c a sec; Ives 60 series cars, 35c ea. AF loco 3326, used, $5; AF loco 3316, used, $4; also Lionel and AF cars, switches and accessories.—Robert T. Van Buskirk, 120 Chestnut Ave., Jersey City, N. J.

NO charge is made for listings in this section. We are not responsible for errors due to the failure of correspondents to write clearly. Nor can we guarantee, hereafter, to print any item longer than 40 words, unless there is a special reason for doing so.

Items for June issue (out May 1) must be received before March 13. Preference is given to those accompanied by our latest Reader's Choice coupon (page 143), properly filled out. If you don't want to clip the magazine, make your own R.C. coupon.

Enclose a stamped envelope when you answer any of the items listed here or when you write to us for free advice on model railroad problems. Many readers refuse to answer cards—except when 2¢ reply postal-cards are used.

HO TRACK, complete circle of 16 secs., AF, new, $3; 50-watt Aladdin transformer, $1; 75-watt Jefferson transformer, $2; postage extra.—S. Blanc, 372 Sherman St., Denver, Colo.

* * *

LUMBER car, boxcar and caboose, also 12 secs. curved track, all AF, $2.50; Lionel *City of Denver* with whistle, 6 cars, engine 636W, $10.—Howard Janes, 73 Malvern St., Melrose, Mass.

* * *

LIONEL O gage rolling stock, perfect cond.; also books and mags. Send for list.—Cyril F. Harder, 692 14th Ave., Paterson, N. J.

* * *

O GAGE locos 253, 262 and 248; also frt. pass. cars, switches, track, etc.—James Logan, 107 E. 5th St., Lansdale, Pa.

* * *

LIONEL trains, derrick 810, $6; coal car 816, $1.25; tank car 815, $1.50; caboose 817, $1.50; all O gage; Lionel boat 44, $2; transformer A, $2; all new eqpmt. Allen Edwards, Southampton, N. Y.

* * *

BLUEPRINTS of New Haven Moguls 2-6-0 classes K-1-b, d. I want Lionel eqpmt., especially locos 249E and 251E.—E. Fereday, 337 Scarboro Rd., Toronto, Ont., Canada.

* * *

BURLINGTON *Zephyr*, AF, good cond., $7.50; Lionel 262, $6.50; also bridges, O gage r.c. switches; AF 50-watt transformer.—James Weaver, 219 Gibbs Ave., Newport, R. I.

* * *

LIONEL O gage eqpmt. Pennsy *Torpedo* 238E and tender 265W, and pass. cars 600, 601 and 602; cost $14.50. Will sell cars separate at $1 each.—Roderick Sibley, 58 Caryl Ave., Yonkers, N. Y.

* * *

IVES, five 140-series pass. cars, two 130-series rebuilt with open platforms; also Lionel loco 258, auto train control, AF caboose and tank car.—G. E. Conley, 5329 Skillman Ave., Woodside, N. Y

* * *

LIONEL std.-gage E unit from 402E loco, in exchange for 2 Lionel 200-series frt. cars or pr. 222 switches. Maerklin 12-in. center flat car with 6-wheel trucks and Lionel couplers for 3-ft. O gage curves, to exchange for 200-series car. Lionel whistle unit and 65 controller to trade for one 200-series car or two No. 20, 20X crossings or 23 bumpers.—Louis O. Harbour, 80 East Blvd., N. Pontiac, Mich.

* * *

SCALECRAFT SP 4-8-2 and Hudson 4-6-4, two coaches, box car, refrigerator car, caboose and other O gage eqpmt. I want HO two-rail or AF HO outfit.—Stanley Jarvis, 3651 Wabansia Ave., Chicago.

O GAGE Lionel r.c. track set and 2 prs. AF 665 m.c. elec. O gage switches, all new. I want any Lionel frt. cars of 600 series.—Clarence Gross, 108 E. 18th St., Holland, Mich.

IVES four O gage double truck 1677 gondolas, 7½ in. long. I want to exchange for Ives O gage double truck 125 boxcars, 9 in. long.—J. Everett Long, West Virginia Univ., Morgantown, W. Va.

SEMI-SCALE engine 4-4-2, Pullman, comb. car, mail car, caboose, reefers, boxcar, flat cars, gondola, MU car—all O gage.—R. H. Carlson, Box 1131, Harlingen, Texas.

LIONEL O gage eqpmt.; 270 lengths of track, 9 switches; steam loco 260E with tender; 254E and 248 elec. jacks; pass. car 710; obs car 712; gondola 812; searchlight car; caboose 817; flat car 651; three-position automatic signals; automatic semaphores; small and large stations; signal towers; K transformer; street lamps, etc. Sell all for $70, or trade for HO eqpmt.—R. Mullane, 51 Chestnut St., North Tarrytown, Pa.

ENGINES 249 EW, 259E, 262, 262; 4 Pullmans, 810 derrick car, seven 650 and two 800 frt. cars; 9 manual and one d.c. switches; 18 wide radius and 92 str. pieces track; bumper, station, controllers, etc.—total value, $175. Will sell lot for $75, or piece by piece at one-half catalog.—Richard Lehman, Box 1596, University Sta., Charlotteville, Va.

FIVE HO frt. cars, 45 ft. brass rail, 20 ft. tie strips, 18 fish plates, track gage, spikes, 4 pr. Mantua couplers, 3 pr. Varney couplers. Will exchange for HO two-rail switcher or sell for $15.—W. K. Blewett, Jr., 3241 So. Humboldt, Minneapolis, Minn.

STD.-GAGE frt. cars, two 390E locos, three transformers, two pr. elec. switches, etc.; also an old Buddy L dump car, 2 in. gage. Will exchange for ½-in. scale loco or cars, or ¾-in. scale loco or cars. Send for list.—V. Lorringfoss, 1529 Glendon Way, Rosemead, Calif.

BUDDY L eqpmt., loco, caboose, 6 different cars, one $15 switch. Must sell whole or in part.—Robert D. Haughton, 1720 Euclid Ave., San Marino, Calif.

LIONEL 251 elec. type loco, excellent cond.; also Ives O gage elec. loco. and tender for $1.50.—Joseph Mimm, 100 South Main St., Sharpsburg, Pa.

WANTED

BODY and frames for Lionel locos 251, 252, 253, 254, 256; pr. Lionel m.c. switches; Westbrook or Perry frt. car kits; Hawk pass. car kits; Andrews or Dalman trucks; Pennsylvania plain roller trucks for pass. cars; O gage tracks, Lionel wide radius track.—Herbert Rosenfeld, 2054 Harrison Ave., Bronx, N. Y. City.

LIONEL loco 262E, 650-series frt. cars, track and switches. I offer microscope, polarizer, tennis raquet and calfskin punching bag, all excellent cond.—Edward Oberstar, 523 Cornell St., Ottawa, Ill.

STD.-GAGE caboose, illuminated model of 1937 or earlier.—Laverne Shannon, Cheswick, Pa.

O GAGE Amer.-type beer cars made by Bing and Maerklin; Dorfan elec. loco 52. Will pay cash for items in good cond.—Franklin Bartlett, 3013 Evergreen Ave Hamilton, Baltimore, Md.

CATALOGS: AF '32 and '34; Lionel '32 and Ives '32. I offer in trade Lionel '37, and AF '36 and '37 catalogs.—Francis Wolford, Bevier, Mo.

O GAGE rolling stock and eqpmt. of latest design. I offer in exchange South American air mail stamps.—P. C. Huselbosch, c/o Atlas Brewery, Cristobal, C. Z.

LIONEL 226E engine and tender; outfits 769W, 767W or 768W, complete with track and transformer; Lionel 238E engine and tender. Give price and cond.—M. S. Ruff, 325 Church St., Lima, O.

ELECTRIC train set with transformer. I offer Trix constructor set with elec. motor and bell. English and American books, 24 in all; also photos and Hard drawings, 500 stamps & Spall telescope, Mickey Mouse slides and many other things.—Peter Whitaker, 28 Avenue Crescent, Harehills Leeds 8, Yorkshire, England.

O GAGE eqpmt., Dorfan locos 53, 54, 51, and 55, bridge, signals and other accessories; Dorfan 4-wheel Pennsy caboose; Bing stations, frt. cars, locos and accessories. Bassett-Lowke, Maerklin and Hornby clockwork or AC elec. eqpmt. and accessories; Ives drawbridge, station sheds, etc.—A. McDuffie, 944 Vermont St., San Francisco.

LIONEL 771 and 772 solid rail track and 731 switches; also any O gage locos capable of turning in 36-inch radius, especially 763EW Hudson. I offer in exchange 1900 negatives 116 and PC; also 10 photo albums; *Railroad Magazine*, Jan., '34, to date; employees' timetables, Baldwin Magazines, etc.—F. W. Weingetz, Jr., 8761 118th St., Richmond Hill, N. Y. City.

O GAGE outfit. Quote prices and describe.—F. C. Lingley, Annapolis Royal, Nova Scotia.

BLUEPRINTS giving detail and assembly accurately for early coal-burning scale model loco, live steam, either ½ or ¾-inch scale.—J. Fahnestock, R 4, Greenville, O.

IVES std-gage locos 1134K, 3245R, 3243R or others; AF locos 4694 and 4696. Ives pass. cars 180, 181, 182, 241, 242, 243; Lionel 500 line frt. car wheels. State age, cond., price. Will pay cash. Also wish to trade AF catalogs, '26 to date; Lionel '27, '28, '30, '31, '32; Ives '23 and '30.—John G. Brophy, 74 Andrew St., Kingston, N. Y.

STANDARD GAGE eqpmt. Need not be in best cond. Describe completely and give prices.—M. E. Wicks, 9146 S. Hamilton Ave., Chicago.

LIONEL O gage track, r.c. switches and crossing.—A. H. Read, 15907 Detroit Ave., Lakewood, O.

LIONEL O gage eqpmt. steam-type, good cond., in exchange for a complete course of R.E.A. fireman's and brakeman's instructions, including complete standard signals, question and answers, etc.; also ARA mechanical rule book.—Al Rainey, 50 Webster Ave., Paterson, N. J.

LOCO, preferably 22-inch gage, or 20-inch gage will do. Building a miniature railroad and would like to buy it or get any information where I can purchase same.—F. L. Lenegar, Route 3, Jackson, O.

CATALOGS. I will trade another of equal value and age, or even a rarer one, for any issue at all that I can use. Interested in any sort of catalogs, folders, trade literature, dealers' and foreign catalogs, etc.—Louis M. Hertz, 640 Riverside Dr., N. Y. City.

O GAGE str. track. I offer in exchange Remington model 12, 22 pump repeater, excellent condition.—Jerry Levinson, Sigma Tau Phi House, State College, Pa.

O GAGE eqpmt., or any railroad or model railroad publications. Will trade 1500 stamps and stamp accessories, 100 various magazines, boys' books and crystal set.—John M. Corliss, 5027 Reisterstown Road, Baltimore, Md.

ROLLING STOCK, ¼-in. scale, finished or kits. I offer in exchange 9 curved and 7 str. secs. Mantua ready-laid track; also Varney comb. coach, stock car, auto car and H. Owen SF reefer, CNJ box—all new, HO gage, two rail.—Cornelius Vermeule, 3d., Box 443, Short Hills, N. J.

O GAGE tinplate locos, cars, track, switches or other eqpmt.; also ¾-in. scale eqpmt.—J. E. Biggerstaff, 621 Greenwood Place, Winnipeg, Canada.

O GAGE, AF outfit 7, 8, 9 or 10, frt. or pass., or Lionel outfit 133 or 236. Will pay $5.—John E. Evans, 1016 High Ave. East, Oskaloosa, Iowa.

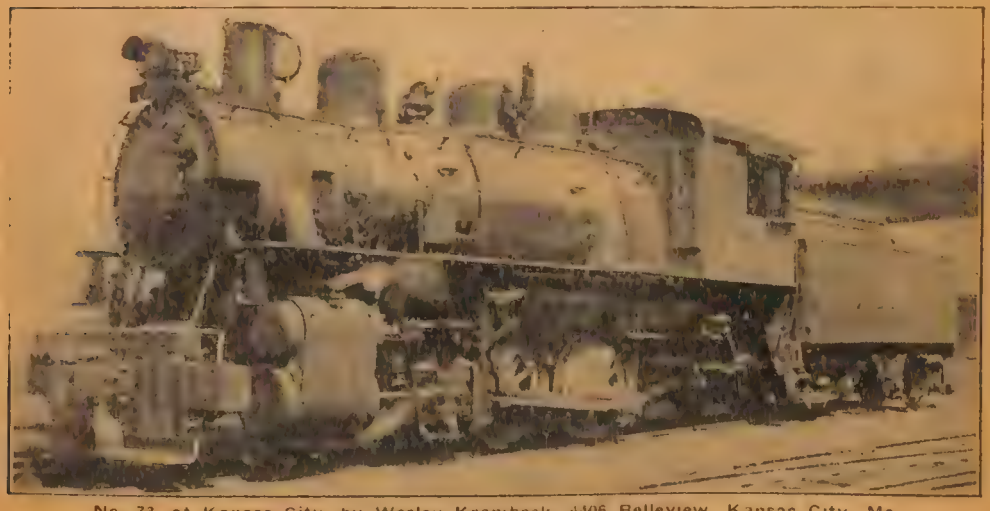
CATALOGS, Lionel, Ives and AF, issued before '24.—John Waring, 1914 East Lynn, Seattle, Wash.

STEAM-type loco, std-gage, with tender. Will exchange 6 std.-gage Dorfan manual switches, 35 mm. movie projector and 1000 ft. scrap movie film, or pay cash.—A. G. Eberhard, 212 E. New York Ave., Valley Stream, N. Y.

Locomotives of the Kansas City Southern Ry.

No. 143, Snapped at DeQuincy, La., by W. Williford, 2909 West Dallas Ave., Houston, Texas

Class	Numbers	Cylinders	Drivers	Boiler Pressure	Weight of Engine Alone	Tractive Force Pounds	Builder & Date
			4-4-0 Type				
B-3	140, 143	18x24	63	160	107,000	16,800	Alco, 1894, 95



No. 73, at Kansas City, by Wesley Krambeck, 4406 Belleview, Kansas City, Mo.

			0-6-0 Type				
F-3	70-73	20x28	51	180	157,500	33,600	Alco, 1913
F-2	81, 83, 86, 88, 95	19x26	51	180	129,900	28,158	Baldwin, 1908 (No. 95 Alco, 1905)
F-2	82	19x26	51	180	152,580	28,158	Baldwin, 1908
		(40,158 lbs. t. f. with tender booster)					
F-2	99	19x26	51	180	143,600	28,158	Alco, 1905
		(40,158 lbs t. f. with tender booster)					

No. 85 at Spiro, Okla., by Robert Hanft, Brainerd, Minn.

2-6-0 Type

C-2	85	19x26	51	180	139,900	28,158	Baldwin, 1908 as 0-6-0 type

No. 803 at Kansas City, by Wesley Krambeck

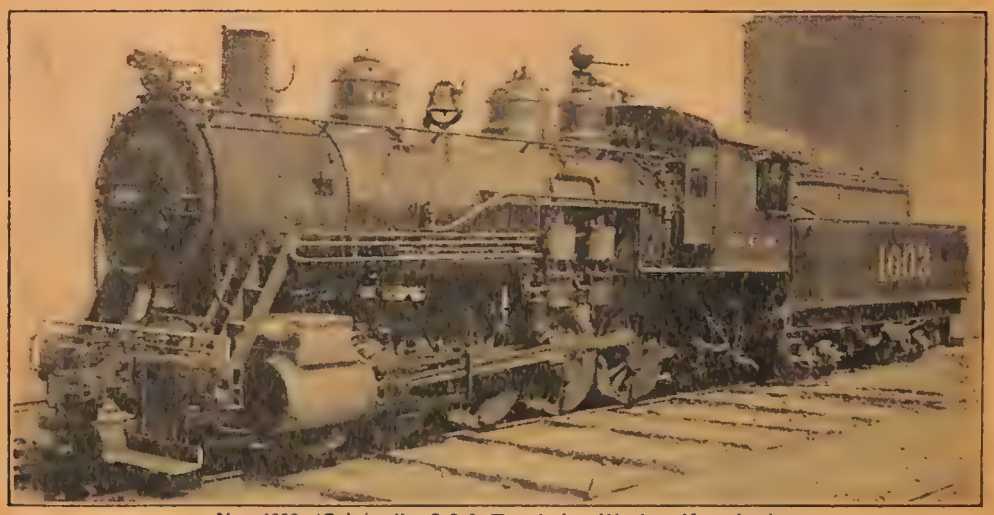
4-6-2 Type

H	800-807	24x28	75	225	258,000	41,126	Alco, 1912
H-1	808-810	24x28	75	225	268,000	41,126	Alco, 1919

No. 750 at Pittsburg, Kan., by Roy F. Blackburn, 647 East North St., Eldon, Mo.

2-8-8-0 Type

G-1	750-756	20x41x32	57	250	495,000	147,220-s 122,685-c	Alco, 1918
G-2	757-766	26x41x32	57	250	507,300	147,220-s 122,683-c	Alco, 1924



No. 1003 (Originally 2-8-0 Type) by Wesley Krambeck

0-8-0 Type

K	1000-1012	21x30	55	210	189,800	42,937	Baldwin, 1900-03 as 2-8-0 type
	(No. 1000 weighs 194,400, exerts 57,637 lbs. t. f. with tender booster; No. 1010 weighs 191,000 lbs.)						
K-1	1020-1031	22x30	55	210	224,500	47,124	as 2-8-0 type
	(No. 1026 weighs 239,380 lbs., exerts 61,824 lbs. t. f. with tender booster)						
	(Nos. 1020-21-22-23-24-27-30 Alco, 1906) (Nos. 1025-26-28-29-31 Baldwin, 1908)						
	(Nos. 1021-23-25-27-29-30 weigh 239,380 lbs.; Nos. 1022-24-28-31 weigh 241,480 lbs.)						

No. 561, One of the Rebuilt 2-8-0's Whose Driver Diameters Were Changed from 57 Inches to 63 Inches (with Disc-Type Centers). By Wesley Krambeck

2-8-0 Type

E-3	475, 478, 483, 484, 490-494, 497, 499, 510, 514, 516, 524, 526-528	22x30	55	210	220,380	47,124	475 to 510, Alco, 1906; 513 to 532, Baldwin, 1908
	477, 480, 481, 485, 486, 489, 495, 498, 513, 519-523, 525, 529, 531, 532	22x30	55	210	222,480	47,124	
E-4	550-555, 557, 558, 561-564	26x30	63	200	262,400	54,724	Alco, 1913
	556, 559, 560	25x30	57	200	251,000	55,948	

4-6-0 Type

D-5	361, 378	20x26	55	180	141,400	28,931	Baldwin, 1898
D-7	600-606	20x26	67	200	178,500	26,389	Baldwin, 1903

0-6-6-0 Type

G	701, 706, 711	22x35x32	52	225	352,000	96,555-s 80,463-c	Alco, 1912

Nos. 900-904 Are Oil-Burners; Nos. 905-909 Are Coal-Burners. This Is No. 909, Snapped at Kansas City by Wesley Krambeck

2-10-4 Type

J	900-909	27x34	70	310	509,000	93,300	Lima, 1937

TOTAL: 140 Engines.

NEXT MONTH: NORTHERN PACIFIC

Seven Miles of Silence

ON THE desert just west of Tucson, Arizona, at a place called Red Rock there is a seven-mile stretch of Southern Pacific track with mitered joints, the only track of that kind in the United States. And in harmony with the desert, this part of the track is practically silent. In other parts of the country railroads have been installing welded joints, but the extreme variations of temperature in the Southwest would cause too much expansion and contraction for welded joints to be considered safe. So each year for the past three years the section of track with the mitered joints has been lengthened, until it has now reached seven miles. The process of mitering the joints involves cutting the top parts of the two rails in such a way that the rail is prevented from sinking when wheels run over it. The familiar clickety-clack is largely eliminated by pieces of fibre placed between the ends of the two rails.

If you *can* spare a dime

pick up a copy of **LOVE TALES Weekly** at your nearest magazine dealers and bring it home to the little woman—or your sister—mother—or sweetheart.
Surely it's worth a dime to give her a magazine she likes!

ALL-STORY LOVE TALES

On sale at all magazine stands every Wednesday.

On *the* Spot

The Old Red Caboose

PERCHED on a high spring wagon-seat
I have driven to town with a load of wheat,
On a hayrack heaped with a coarse slough hay
I have come from the mowing many a day;
Over the rangeland, far and wide,
On a tricky broncho the herd I'd ride;
But I rode to the county seat in state
In the red caboose of the local freight.

In the days of youth, gone long before,
How often I've sat near the open door
Of the old caboose, felt it rock and sway,
And watched the track slip out and away
With the telegraph poles across the plain;
Prairie and track and the moving train
All that a searching human eye
Could see in the circle beneath the sky.

I may travel long, and may travel far,
In liner or clipper or palace car,
But never so long that I could forget
Coming in from the dark and wet
To the shelter and warmth of the rough, clean shack
At the end of a freight train on the track;
Never so far that my dreams turned loose
Would not carry me back to the old caboose.
—Maude K. Backlund, Lisbon, N. D.

* * *

FOR the benefit of newcomers we'd like to explain that a Reader's Choice coupon is printed on page 143 every month. The purpose of these coupons is to keep us informed on what kind of material is most popular among the railroad men and fans who read the magazine. Many persons list their votes in letters or on postcards instead of using the printed coupon. All choices count the same, regardless how they are sent in to us.

Of the total number of votes received so far from the February issue, 35 per cent was cast for the seven *illustrated features* (45 pages), 32 per cent for the eight *popular departments* (35 pages), 19 per cent for the two *fiction* stories, and the remaining 14 per cent for the three *true tales of the rails* (15 pages).

On the basis of votes per page, however, *true tales* outdistance all the other classifications in popularity, closely followed by the *departments;* with the *illustrated features* and the *fiction* trailing in third and fourth places respectively. The *true tales* strength is all the more impressive when we consider that no inducements are held out for *true tales* votes such as are offered by two of our *departments* (RCC pins and free listing in *The Model Trading Post*).

Incidentally, when we print the popularity rating each month we lump all the true tales in a unit, because many readers vote for them that way instead of voting for the individual tales. Here is the February line-up as it stood at the time of our April issue's going to press:

1. True Tales of the Rails
2. The Careless Road, Harry Bedwell
3. Mile-a-Minute Runs, D. M. Steffee
4. Logging Road, Earl Clark
5. The Good Samaritan, James Earp
6. By the Light of the Lantern
7. On the Spot
8. Locomotives of New Haven (Part 2)
9. Model Railroading, David Marshall
10. Railroad Camera Club
11. Number Thirteen (Photographs)
12. The Boomer Trail
13. Along the Iron Pike, Joseph Easley
14. Old Engine in "Jesse James" Film
15. Railfan Excursions

Speed Records

I PROTEST against fantastic claims of speed records such as those of the Pennsylvania Special and the Crile Special which, unsupported by sufficient data, have been publicized in certain quarters. I congratulate Donald M. Steffee, compiler of "Mile-a-Minute Runs" (*Feb. issue*) on his fine explanation of speed figures in the Nov. *Spot* department.

Although I have a fairly comprehensive collection of railroadiana covering the last 40 years and have spent weeks in New York's great Public Library going over bound volumes of railroad periodicals, I have yet to discover any authoritative mention of some so-called top speeds of steam locomotives.

By sending 30 cents to Photostat Service, Public Library, Fifth Ave. and 42nd St., N. Y. City, you can get a photostat of page 543 of

the British *Railway Gazette* of Nov. 16, 1906, giving a table of fast runs from 1880 to 1906. Integrity of the *Gazette* is above question. The Pennsy's alleged feat near Ada, O., in 1905 does not appear. Heading the list is the much-touted run on the Plant System in March, 1901, but instead of 5 miles in 2½ minutes the figures show 4.8 miles in 2 minutes and 40 seconds, or 107 m.p.h. instead of 120 m.p.h. This bears out the sort of thing Mr. Steffee explains. The Plant run took place 40 miles north of Jacksonville, Fla., and was timed by officials, including F. S. Gannon, Vice President of the Southern, with stop watches. These officials rode in one car of the 3-car, 140-ton special mail train. An account of this trip, printed on pages 21 and 22, Jan. 1925 *Railway and Locomotive Engineering,* was written by W. E. Symons, designer of the engine that hauled the train. And the renowned "112½ m.p.h." run on the NYC is given by the *Gazette* as 102 m.p.h.

I do not claim that speed records have to appear in technical journals to become authentic, but it is too severe a strain on credulity to pretend that a burst of speed, long a secret, is a record. After all, what makes a fast railroad run authentic? The answer is, nothing! Certainly not the allegations of one or two interested employes, such as the chief dispatcher and the trainmaster in the record claimed for the Crile Special.

Such rail runs should be supervised by an authorized impartial association, as is done with automobiles and aircraft. Until then, let's wipe the slate clean of dubious legends.—DILLWYN PARRISH, Windsor, Vt.

"TIMING THE FAST ONES" (*Jan. issue*) reminded me that during the war I rode the *Boardwalk Flyer* just before the summer timetable became effective. The train consisted of ten cars hauled by a Reading Atlantic with 84-inch wheels. I clocked it at 41 to 43 seconds to the mile.

Timing trains was a habit I acquired while traveling for the NYC some 20 to 30 years ago. My fastest ride was in 1916 between Toledo and Elkhart. I boarded the train at Coldwater 30 minutes late. The train consisted of 4 cars with a K-2 Pacific. Stops were 4 to 5 miles apart and the engineer was crowding her. Between White Pigeon and Elkhart I caught three consecutive miles at 39, 38 and 39 seconds, or better than 94 miles an hour.—H. A. MUNSELL, 663 Orchard St., Oradell, N. J.

* * *

JUDGING from comments, some readers are not certain as to what constitutes a "mile-a-minute run." Enthusiasm for a particular road or train leads many to submit lists of runs believed to have been omitted from our tables published in Feb. RAILROAD MAGAZINE.

Careful check of such runs reveals that they are almost invariably *pass-to-pass* runs, meaning that both points shown are passed at speed by the train in question. As such they are not eligible for the tables. All the runs we listed will be found to be on a *start-to-stop* basis. The run starts at a regular station stop or a stop to change engines, crews or for any reason as shown in the operating timetable, to the next station or operating stop.

Runs to or from conditional stops are in-

NEW MILE-A-MINUTE RUNS—ATLANTIC COAST LINE

Train	From	To	Miles	Time (min.)	Speed (m.p.h.)
87 Florida Special (two runs)	Florence	Bennett	96.3	92	62.8
71 Miamian	Florence	Bennett	96.3	93	62.2
88 Florida Special (two runs)	Bennett	Florence	96.3	93	62.2
72 Miamian	Bennett	Florence	96.3	95	60.8
71 Miamian	Fayetteville	Florence	83.0	82	60.7
87 Florida Special (two runs)	Milan	Florence	84.7	84	60.5

SEABOARD AIR LINE

8 Orange Blossom Spl.	W. Palm Beach	Sebring	102.6	92	66.9
7 Orange Blossom Spl.	Sebring	W. Palm Beach	102.6	94	65.5
7 Orange Blossom Spl.	Wildwood	Winter Haven	65.4	60	65.4
8 Orange Blossom Spl.	Baldwin	Thalmann	75.0	71	63.4
8 Orange Blossom Spl.	Winter Haven	Wildwood	65.4	64	61.3
7 Orange Blossom Spl.	W. Lake Wales	Avon Park	22.4	22	61.2
8 Orange Blossom Spl.	Avon Park	W. Lake Wales			
7 Orange Blossom Spl.	Baldwin	Wildwood	108.9	107	61.1
8 Orange Blossom Spl.	Wildwood	Baldwin			
807 Southern States Spl.	Sherman	Indiantown	22.0	22	60.0

cluded, except in instances where there is reason to believe the stop is made so rarely as to place it in the "special stop" category and thus classify the run as a special, not a regular daily performance.

To compile a list of all the *pass-to-pass* runs at over 60 m.p.h. in North America would be an almost impossible task, involving dozens of trains on many roads and divisions not now shown. In addition, such a tabulation would be of no practical value. Such runs may be likened to a burst of speed in an automobile along a smooth, straight stretch of highway in the course of a long drive through traffic-congested cities where, although no stop may be made, the average is kept down to about 35 or 40 m.p.h. for the whole trip.

It is not the spurts on the easy stages, but what is done at a mile-a-minute clip, inclusive of time required to stop and start at stations and to overcome slow orders, etc., that show the true picture of what the carriers are doing to provide swift modern transportation.

As forecast in our article, the winter schedules on the Atlantic Coast Line and the Seaboard Air Line added several new mile-a-minute runs and considerable mileage to the totals we listed in the February issue.

All the ACL runs are made with the new 4-8-4 steam locomotives; whereas, with the lone exception of No. 807 from Sherman to Indiantown (22 miles with steam), those on the SAL are with the new 6000-hp. Diesel-electrics. A summary of these new runs shows—*SAL, Diesel-electric:* a total of 270 miles (3 runs) at 64 m.p.h. or over; 345 miles (4 runs) at 62 m.p.h. or over; 673 miles (9 runs) at 60 m.p.h. or over; *SAL, steam:* 22 miles (1 run) at 60 m.p.h. or over; *ACL, steam:* 481 miles (5 runs) at 62 m.p.h. or over; 830 miles (9 runs) at 60 m.p.h. or over.—DONALD M. STEFFEE, 512 8th Ave., Brooklyn, N. Y. City.

Down on the Rock Island

WORD comes from Oklahoma City that Miss Blanche Yvonne Mosier, 125 N.W. 31st Street, author of the story "Railroad Town" we printed last month, has won first prize in a short-story contest conducted by *The Oklahoma News*. Her entry, "No Violets Tonight, Charles," won out over 322 competitors. Although it is not a railroad subject, we hasten to congratulate Blanche, whose father is a CRI&P locomotive engineer, recently retired.

* * *

THAT picture of a barefooted boy riding an engine cab (*"Back in the Days," by Harry Temple, Dec. issue*) reminded me of my own youth, when I was attending an old red schoolhouse ten miles east of Des Moines on the CRI&P. From city limits the railroad is up a heavy grade and on a curve, just made for boys to catch trains. My route to school was two miles across fields and hitting ties for the last mile.

On March 4, 1897, the day President McKinley was inaugurated, I loaded my pockets with apples for enginemen and swung aboard a slow-moving 4-4-0 American-type engine of 45 tons hauling a 500-ton train. It was my greatest thrill. How well I remember the shining brass lubricator Nathan injector, valve extension rods, clock, green-beaded cab ceiling, black upholstered cushions, polished throttle and reverse levers, bright door chain, long-spouted oilcan, and torch on a tray over the firedoor, and candlewick lamps for water and steam gages, and polished black boilerhead!

I rode the smoky end to school for three years, even riding on a mile to the depot and walking back. As a result I got tardy marks and punishment, not to mention the marked disapproval of the schoolma'ams and even one dismissal for disobeying orders to stop riding engines to school. But I've never regretted it.—E. J. REINKING, Lieut., U.S.A., retired, 6014 Highland Ave., Tampa, Fla.

* * *

BUSINESS was so brisk recently in the east yards of the Rock Island at Oklahoma City that Toney Foster, 304 N.E. 9th St., engineer on a yard "goat," couldn't take time out to attend the marriage of his son, R. T. Foster, to Miss Mary E. Greenard. So the happy couple decided to stage the ceremony in Dad's engine cab during his lunch hour. A few members of the family draped themselves around the engine, while young Foster and his lovely bride climbed into the cab, and a Methodist preacher tied the knot. Immediately afterward, the fireman leaned out of the cab window, passed the signal "Slack 'em back!" and even before the party had made their way out of the freight yard, regular business on the CRI&P was resumed.—"WOODY," Okla' oma City.

(EDITOR'S NOTE: *This incident reminds us of a fiction story we published two years ago, "Linked and Pinned," in which a railfan known as "The Engine Picture Kid" married a railfanette named Goldenrod, in an engine-cab ceremony on the Happy Valley Line—the last of a series of humorous stories built around those two characters.*)

The Reader's Viewpoint

THANK H. Ridgeley for his true-to-life tale, "Unnecessary Work" (*Feb. issue.*) I have more than 14 years' seniority as engineer on the GC&SF and can remember the mad rush of oil and wheat trains in the good old days. When leaving Temple for Brownwood, I sometimes got running orders with 15 to 18 engine numbers, and have been 16 hours covering the 30 miles. Oil and wheat got to moving so fast on the Lampasas Branch that I bid in a turn on the south end in block-signal territory where the brakeman could sleep a while longer in the caboose. Most of the boomers wouldn't go back to flag until it was too late, and several of the old wooden coaches and boxcar cabooses were headed into and wrecked—without fatalities.

Does Mr. Ridgeley remember "Ikey," the operator at Lampasas Jct.? Ikey always had a big pot of coffee on the office stove. He is now in business at Cameron and doing well.—BILL PHILLIPS, % J. R. Massey, Waurika, Okla.

* * *

ENGINEER SHAW was not in the first serious accident on the Old Nemo Line, as alleged by M. L. Hart in his true tale, "A Narrow Gage in the Black Hills" (*Feb. issue*). Several weeks after the accident in which Engineer Lew Baschky and Fireman Frank Brown were killed, I was deadheading from Alliance to Deadwood with Dad Shaw in No. 538 swinging around a curve, Dad pinched 'em down and called me over to his side to point out the spot where the boys had turned over. Month later, I heard of Dad being fatally burned when the oil fire shot back through the firebox door.—J. M. FLANAGAN, Hotel Lincoln, Scott'sbluff, Neb.

* * *

"RATHOLE DIVISION"? Yes, I read H. G. Monroe's article (*Jan. issue*). I was born on that division—at Greenwood, Ky. With a gang of boy friends I had a lot of dangerous fun jumping on and off trains. Everybody from Burnsides to Flatrock knew about old No. 9 Tunnel. When I grew up I had a girl living on top of that place, and could visit her only during the day.

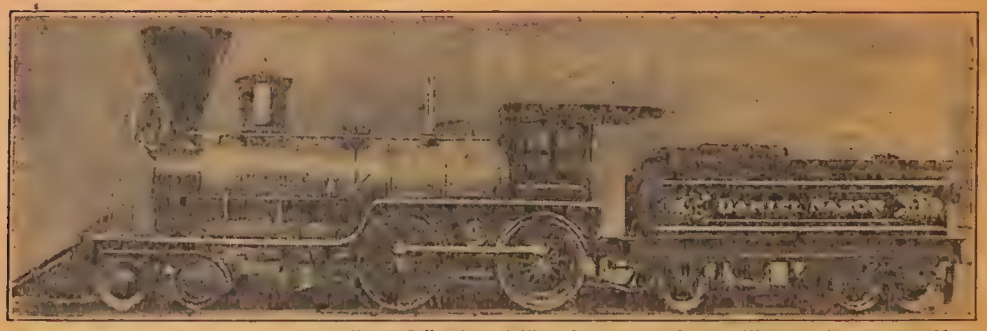
R. T. Hines, signal foreman, gave me a job on the Greenwood Division, which included No. 9 Tunnel, working under Mr. Souleyrette. After I had worked a month I was left alone. One day I got a line-up on the trains—or thought I did—and was coasting along on a velocipede with a toolbox and my dinner on the stern of the vehicle. Suddenly I heard a whistle behind me, and made an emergency application on the hand brake, which threw the three-wheeled contraption off the rails. Grabbing the tail end, I hurled the thing clear. My dinner was a total wreck. I could have endured that, but the train crew gave me the horse-laugh. I finally learned what had caused my predicament; the dispatcher unexpectedly put on an extra.

Once the "Rathole" firemen struck for more money. They were replaced by Negroes. An attempt was made to scare off the colored fireman, but it didn't work.

My father, now 83, still runs a blacksmith shop. He says he is going to retire when he is 100.—JAMES S. BRAY, 1055 W. 45th St., Norfolk, Va.

Photo by E. H. Nervo, Box 66, Geyserville, Calif.

When Winter Snows Start to Melt, Get Ready for Floods! This View Shows a Section of the Northwestern Pacific Main Line at Lytton, Calif., Buried Under More Than Six Feet of Water in 1937



From Collection of Wm. J. Fitzpatrick, 10½ Kingston St., Boston, Mass.

The "Daniel Nason," Built in 1863 by George S. Griggs for the Boston & Providence, Was Until Recently at Purdue University. She Is Now Being Overhauled by the NYNH&H for Exhibition in the New York World's Fair. (See Page 68)

LAST summer I made a swell engine-picture tour of 59 days at a total traveling cost of only $1.05 for 4180 miles in 10 days of actual traveling time. I left home July 19th, going by way of Niagara Falls, Michigan, North Dakota and Montana, and photographing all locomotives that were not too skittish. I had a real nice time, using my thumb for a pass much of the time. Now and then I rode the hurricane deck of freight trains on which thumbs were not recognized. But I dropped a paper bag loaded with food between two cars, so that ride was somewhat expensive, if you get what I mean.

I even helped some farmers to get in their wheat and otherwise made myself more or less useful. When I got tired of riding west I reversed and look at the scenery from the other direction. Once a kindly policeman invited me to stay a few days board free, but the judge cancelled his invitation.

I left Chicago on the *Erie Limited*, though the engineer could not see my thumb on account of the smoke. After a very interesting and instructive trip, I returned to my starting point Sept. 16th.—C. B. CULMER (*furloughed B&O brakeman*), Tylersburg, Pa.

* * *

"POSTALIZED" railroad rates were proposed in full page ads in New York daily papers last Dec. 26th. Who paid for the ad? Was it insurance companies and certain trusts anxious to have Government bonds substituted for their present holdings of railroad paper? Postalization would relieve carriers of all taxation; but taxes must be raised somewhere, somehow. The plan is as illogical as to market automobiles at $1 each on the theory that the huge demand would stimulate production until costs would drop to less than $1 a car.

Rail rates, especially in the East, should be lowered so that a family may travel faster, more comfortably and more economically; but rates must not be lower than the actual cost of the haul. The drop of passenger traffic from $1,300,000,000 in 1920 to four hundred millions in 1937 is due almost entirely to automobiles and to highways paid for by the public treasury. The only gain from postalization would be a reduction in the slaughter on the highways.—A. J. FRANCK, Box 171, Richmond Hill, N. Y. City.

(EDITOR'S NOTE: *Since Mr. Franck wrote the above, the Interstate Commerce Commission has asked Congress for a mandate to study the possibilities of railroad postalization.*)

* * *

MORE than 80 per cent of all cases of deaths and injuries in railroading can be attributed to hurry or carelessness. This conclusion I have reached as a result of many years of experience on several Class I railroads, plus more than seven years as investigator for the legal aid department of the B. of R. T. and from information furnished by several thousand I. C. C. reports. Damage to equipment and injuries to passengers and others cost the carriers millions of dollars annually. Observance of the following rules will promote safety:

Don't go between cars to pull a stuck or tight pin.

Don't cut or couple airhose or safety chains without protection against engine or other crew movement.

Don't open knuckles by hand without protection against unexpected movements.

Don't ride the footboard when shoving cars, unless at the end of the footboard so you will fall clear in case of collision.

Never get off cars or engines without looking where you will land.

Watch other engine and crew movements as well as your own.

Be careful setting or releasing brakes.

Keep away from ends of cars when riding on top.—W. E. BUSH (*B. of R. T. investigator of death and personal injury cases*), 2840 W. Washington Blvd., Chicago.

From Collection of Lawrence Munn, 1206 S. Main St., McAlester, Okla.

This Katy Passenger Train, Southbound, Pulled by Engine No. 368, Staged a "Cornfield Meet" with a Drove of Mules Near McAlester, Okla., in 1912. One of the Animals Was Hurled Into a Switch Stand, Breaking the Stand and Shunting the Train Onto a Coal Spur. A Woman Was Killed. Who Can Supply Further Details?

Information Booth

WHO can tell about the head-on collision of two passenger trains on the Wabash at Sand Creek, Mich., where the Lima Northern crossed the Wabash, on Thanksgiving night, 1898? Ed Cole, living next door to me, was on his LN engine and saw the wreck.—P. J. BAKER, towerman, P. E. Ry., Los Angeles, Calif.

* * *

THAT accident which R. B. Gudger, of Warrenton, Ore., asked about in Jan. issue was the Newmarket wreck between Strawberry Plains and Jefferson City, Tenn., in 1904. It was a head-on collision between trains 12 and 15, one of the worst wrecks of Southern passenger trains in history. I believe that nearly 100 persons were killed. No further information is available.—J. T. MCCARTHY, 607 E. Unaka Ave., Johnson City, Tenn.

WE have information to the effect that "A Railroad Man's Prayer," recently reprinted in RAILROAD MAGAZINE, was written by Chas. Hazelrigg of Mulhall, Okla.—A. E. SCHWING, ass't editor, *The Railroad Trainman*, 8020 Superior Ave. W., Cleveland, O.

* * *

"THE SIGNALMAN," reprinted in your Dec. issue, was erroneously attributed to P. O. Gladhill. I am the author of that poem. I have been a contributor to RAILROAD MAGAZINE'S predecessor. The Signalman in real life was a fellow named "Ed." I have forgotten his other name, but P. O. Gladhill was his boss. Many a time I handed this poem up on a stick to an engineer like a "19" order as he passed my shanty.—CHARLES S. WOOD, Hill Hospital, Quincy, Ill.

* * *

THE French liner *Normandie* has a brother, a steam train which carries only passengers sailing on the *Normandie* from St. Lazare,

Paris. It is painted blue and is known as "the boat train." Between sailings it is groomed from pilot to observation platform. Can any reader tell me of other single-purpose trains?—A. H. REIMER, 1253 E. 135th St., Cleveland, O.

* * *

EIGHT of the 14 stations on the 50-mile Washington, Idaho & Montana Railway are named after big colleges: Wellesley, Princeton, Harvard, Yale, Stanford, Vassar, Cornell and Purdue.—JOHN DENNY, JR., 28 S. 2nd St., Columbia, Pa.

* * *

SPEAKING of station names, many of those in the Everglades region of the Florida East Coast Railway hark back to the Seminole Indians. For instance: Kolokee, Chuluota, Bithlo, Pocotaw, Wewahotee, Salofka, Tohopee, Holopaw, Illahaw, Kittawaw, Apoxsee, Lokosee, Cyprola, Yeehaw, Hilolo and Efaw.—J. W. NEWBERN, Rte. 1, Box 56B, High Springs, Fla.

NUMEROUS instances of abandoned railroad stations converted to other uses were printed last month. Here's another: After the LIRR elevated station at Auburndale was abandoned five years ago, it was moved 500 yards and reopened as St. Mary's Chapel in Flushing.—H. F. MARPLES, 33-16 170th St., Flushing, N. Y.

* * *

CORRECTION: My letter in Feb. issue should have said I was braking on the UP 50 years ago, not 22.—ED HUFFSMITH (ex-boomer), Long Beach, Calif.

* * *

ALTHOUGH Florida is about 2000 miles from the Pacific Ocean and has no mountains higher than 325 feet above sea level, both the Seaboard Air Line and the Atlantic Coast Line use locomotives of the Pacific (4-6-2) and Mountain (4-8-2) types in this state.—KENNETH WILBUR, 1345 N.W. 31st St., Miami, Fla.

A Section for Juice Fans

Photo by C. V. Hess

Type of Car Shown at the Right Figured in a Disastrous Runaway in 1915

NOT one of the 84 passengers who had overcrowded a Canadian excursion car of the Niagara Gorge Line escaped death or injury in the runaway-wreck of July 8, 1915. The passengers were members of two Toronto Sunday-school picnic parties who had spent the day in a grove near Brock monument, and they piled into the double-truck open car in excessive numbers, some even standing on the running board at the sides, because rain had come on and they wouldn't wait for the next car

At the bridge which spans the river between Queenstown, Ont., and Lewiston, N. Y., the conductor stepped off to throw a switch, and then signaled the motorman to proceed. But the downpour had made the rails slippery. The motorman, experienced as he was, could not get his car under control. Despite his frantic efforts, the car skidded down the grade and jumped the rails on a curve at the bottom of the hill. It first crashed into a tree, which tore one side entirely off. Then it struck a telegraph pole and overturned. The battered wreck was a ghastly mess jammed with injured and dead, mostly women and children. The conductor, appalled by the horror and with piteous scream rending his ears, ran all the way to Queenstown for aid. Thirteen passengers were killed outright; others died shortly afterward.

The Niagara Gorge Line ran along the Canadian side between Queenstown and Niagara Falls, Ont. It was owned by the International

Railway but was operated by the Great Gorge Route Company, which also operated *and owned* the tourist electric line running on the American side. The latter was abandoned Sept. 17, 1935. The Canadian line had been abandoned a few years previous.—C. V. HESS, 562½ Monroe Ave., Rochester, N. Y.

* * *

"AUTOMATIC TRAIN CREWS," by George W. Booth (*Jan. issue*), reminded me that I had often ridden over the trestle he describes, but I hadn't heard of the near-accident upon which his true tale was based. However, I do know of another event which happened on the same electric line and approximately a half-mile from that trestle. It was told to me by the passenger conductor who had taken part in it.

That line, the Interurban Division of the old Portland Railway, Light & Power Co., was single-tracked. The roadbed north of the trestle was simply a ledge cut from the mountain side, about 100 feet from the river. For some distance it was a series of blind curves, with a few short stretches of tangent track, and carried a slow order for all trains.

One day, there were two trains, a passenger and a work train, running over that stretch ten minutes apart, with the passenger in the lead. The latter passed over safely; but some time during those ten minutes, part of the precarious roadbed apparently had become tired of supporting the track any longer and had decided to go elsewhere, for it slid out and landed down on the river bank. It must have been loosened by winter rains.

Well, the terrified work-train crew suddenly found themselves facing a chasm spanned by a track that looked like strands of a cobweb. They stopped abruptly at the edge of the slide, admitting that only their reduced speed had saved their lives. Railroading through the cornfields is one thing, but in the mountains it is quite different.—MILO P. ATKINS, 831 S.W. 6th Ave., Portland, Ore.

ONE-MAN street-cars are forbidden in San Francisco in a city ordinance which was upheld last Jan. 3rd by the U. S. Supreme Court. The Market St. Co. here will probably sell the 135 such cars which it has accumulated. Down in Fresno, a line which had 30 one-man cars has just been abandoned.—WARREN MILLER, 1776 Greenwich St., San Francisco.

* * *

PASSING of the interurban in Ohio is pictured in records of the State Utilities Commission. Twenty years ago Ohio was crisscrossed by more than 2600 miles of traction tracks. Not 300 miles remain. At the 1918 peak 73 companies were operating. Now there are only 16. Once interurbans spanned the state from border to border; now the longest line, Toledo-Port Clinton, is barely 57 miles. The shortest is the Monongahela-West Penn, sixth-tenths of a mile.

One of the better interurbans is the Toledo & Indiana, running between Toledo and Bryan, 55.8 miles, entirely on private right-of-way. This road does an extensive freight business and hauls cars from all steam lines. Trains of 20 to 40 cars apiece are common. There are 15 passenger runs daily in each direction. Equipment consists of 6 passenger cars, 16 freight cars, one service car and 3 electric locomotives. The company is doing fairly well financially.

Other interurbans still operating in Ohio are the Toledo & Marblehead, 57 miles, mostly a freight line; the Youngstown & Suburban, 24 miles, handling steam-line freight; the Steubenville, East Liverpool & Beaver Valley, 40 miles; the Stark Electric, 37 miles; the Springfield Suburban, 3.3 miles; the Cincinnati & Lake Erie, 36 miles (all that is left of a formerly great line); the Cooperative Transit Co., 13.2 miles; the Pioneer & Fayette 12.5 miles; the West End Traction 13.6 miles; the Portsmouth Public Service Co., 12.2 miles; the Inter-City Transit, 10.4 miles, and the Cleveland Interurban, 7.6.—HANK HEINL, 415 Grant St., Akron, O.

Photo by Roy Mender, Yorkville, Ill.

The "Galloping Goose" (Shown in the Foreground) Was Officially Known as No. 7 of the Old Fox & Illinois Union. She Was, in Fact, the Only Gas-Electric Car the Line Ever Owned. Last Fall When Abandonment Was Decreed, the Goose Was Coupled Onto a Boxcar Borrowed from the Burlington. Thus, with 40 Passengers and a Lot of Food on Board, the F&IU Staged Its Graveyard Run in a Blaze of Glory

The British Empire Heard From

Photo by H. Art Merry, Portage La Prairie, Man., Canada

A Hair-Raising Trestle, with a 13-Degree Curve, on the Pacific Great Eastern Railway a Few Miles South of Chasm, B. C., Canada

THAT extra-gang foreman in S. W. Marvin's true tale, "Off the Record" (*Feb. issue*), was the victim of a dirty trick on the part of Engineer Johnson. Our foremen have a tough time trying to please both sides, the enginemen as well as the officials. A hoghead gets angry if he is slowed down on account of necessary track repairs, while on the other hand the officials get still angrier if 50 or 60 men have to stand around idle to accommodate the train crews. In every case, rules require the foreman to slow all trains which run over track while it is being fixed.

Some time ago, when I was working with a gang relaying steel on the CP main, the engineers deliberately ignored their caution orders and slow orders, also our flagmen and "guns" (torpedoes placed on the rail). We would barely get a switch-point in and closed when along would come a time freight ahead of schedule, her throttle wide open, thundering toward us, hell-bent for election. The sixty of us would scramble up the embankment to safety as fast as we could. Later the Limited would do the same thing disregarding red flags and guns.—H. A. MERRY, Portage La Prairie, Man., Canada.

* * *

JOE EASLEY asks if anybody can match the New South Wales prison street-car he pictured in "Along the Iron Pike," Feb. issue. The Montreal Tramways used to have such a car, but five years ago it was replaced by two "Black Marias" (the usual police vans) and was sent to a maintenance yard to rot.—E. D. JONES, 864 2nd Ave., Verdun, Que., Canada.

BRITISH railways are having hard sledding. Chairman Whitelaw of the LNER proposes nationalizing them. Lord Stamp of the LMS thinks a nationalized system would be too unwieldy. The labor unions allege that the railways are dying. In one recent week revenues were down 250,000 pounds (about $1,250,000) from those of the corresponding week a year ago. Holders of 300,000,000 pounds in shares have received hardly a penny in dividends in ten years. Rates have gone up 5 per cent but that did not save the situation. In 1933 highway traffic moved 46,000,000 tons of freight; by 1937 this had jumped to 54,000,000 tons, an increase of 18 per cent. Despite the increase in population, the railways are carrying 500 million fewer passengers per year than in pre-war days.—HARRY CORT, 8 Leighton St., Moston Lane, Manchester, 10, England.

* * *

MANY British narrow-gage lines have folded up in recent years. With but one or two exceptions, the few that are left have a struggle to carry on. Our narrow-gages were built originally as mineral roads, passenger service being added afterward. When the mines, quarries, etc., were worked out, the little railways became unprofitable and were abandoned.

One of the exceptions is the Festiniog "Toy" in Wales, the world's oldest existing narrow-gage, described and pictured in last July's RAILROAD MAGAZINE. It is still running, but mainly for passenger business in summer. The slate traffic for which it originally catered has dwindled. The Welsh Highland Ry., worked in conjunction with the Festiniog, is derelict. Track has disappeared in many places, while station buildings and bridges have collapsed. Motor competition has had an adverse effect on other narrow-gages, but not to the same extent as in the United States.—H. E. MEATS, 82 Wood End Lane, Erdington, Birmingham, 23, England.

* * *

FOR the first time Labor, Progressive and I.L.P. members voted together recently for an amendment to a motion before Glasgow town council to build 600 new tramcars for this city. Only the two big Scottish cities, Glasgow and Edinburgh, have gone in for tram construction. In England and Ireland, busses and trolley busses are superseding electric cars.—O. C. GILLESPIE, 28 Gray St., Sandyford, Glasgow, C 3, Scotland.

* * *

STANDING on main London arterial roads between 7 and 8 a.m., I can count as many as 50 motor trucks, each weighing 20 tons, or more, from all parts of the country. Competition is getting so serious that the railways are appealing for public support in Parliament. Many employes have been put out of work by the truck lines. The situation is getting as bad here as in the United States.—CHAS. A. SEALE, JR., 63 Bedford Road, West Ealing W. 13, London, Middlesex, England.

* * *

ONE of the many "shortest railroads in the world," namely, the narrow-gage Huntsville & Lake of Bays, on the Muskoka Lakes in Northern Ontario, withstood a severe snow blockade last winter. "The Corkscrew Limited," as the daily passenger train is called, was tied up. So also were the two dinkeys and all the rest of the equipment, not to mention the 130-foot grade on the one-mile line.—HALLAM MOUNTAIN, Fredericton, N. B., Canada.

In Connection with the Recent Opening of a New International Bridge, the Gigantic 6409 of the Canadian National Railways Was Exhibited at Port Huron, Mich., Beside a Midget Sister of Hers Which Ran on the Grand Trunk Sixty Years Ago

New Railroad Books

The Humorous Side of Commuting

Daily Except Sundays, by Edward Streeter, 144 pages, 50 comic illustrations by Gluyas Williams; Simon & Schuster, N. Y. City; $1.25.

WITH the sole exception of *Pigs Is Pigs*, by the late Ellis Parker Butler, which came out at least twenty-five years ago, we have never laughed more spontaneously over any other railroad book than we did while reading *Daily Except Sundays*. This is really a new kind of travelogue, written by a man who has covered 216,000 miles by rail, over nine times around the world, in the last seventeen years. During all that time, he says, "I have seldom been more than twenty-five miles from my house." He confesses: "I don't mind mileage but I do insist upon sleeping in my own bed every night, having a place to put my old razor blades, and being able to lay my hand on a clean shirt in the morning. In short, I have solved the travel problem by being a commuter." The sub-title of his book is, appropriately, *What Every Commuter Should Know*.

"If anyone thinks that commuting is not traveling," Mr. Streeter contends, "let him try 5400 trips between Fairview Manor and town—at his own expense, of course. . . . Not everyone can be a good commuter. It calls for highly developed, special qualities—endurance, resourcefulness, decision, and cunning, tempered with a dash of ruthlessness."

The above words are well chosen. Dale Carnegie wrote a classic on *How to Win Friends*, etc. Ed Streeter tells how to *lose* friends. Or, putting it more exactly, how to dodge garrulous traveling companions without alienating their goodwill. To do that calls for a high degree of chicanery. Not always do you succeed. The illustration we have reproduced here shows what is likely to happen if you fail to get rid of a pest when boarding a train. The author says:

"By slipping into the seat behind you he has you at his mercy. All he needs to do is to bend forward from the waist. He can then mumble in your ear, without fear of interruption, for forty-five minutes. Of course it is possible to avoid him by leaning forward also, but that would make the whole thing look like the start of a crew race, which would obviously be silly."

Your reviewer, who has commuted more years than he cares to admit, on such roads as the New Haven, the Pennsy-Reading Seashore, and the Long Island, will bear witness that the witty barbs of Ed Streeter are pointed with canny wisdom. If you are a commuter you know what we mean. We commend *Daily Except Sunday* to all fellow-sufferers who are forced to spend one-twelfth of their lives shuttling by rail between home and office. Those of you who are *not* commuters, and hope to remain free men, should read the book anyhow; it will vindicate your sound judgment.

"By Slipping into the Seat Behind You He Has You at His Mercy."—One of the Fifty Illustrations in "Daily Except Sundays"

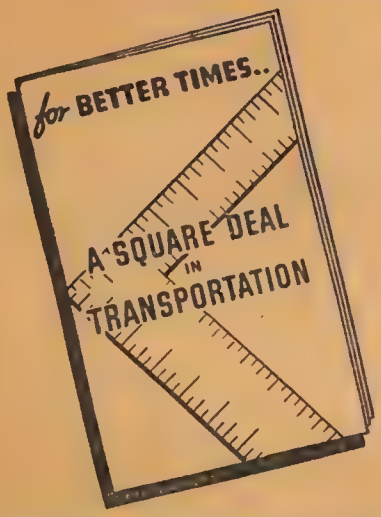
This is Ed's first venture in the railroad field. He has, however, turned out a flock of miscellaneous books and stories. His *Dere Mable* is said to have had more readers than any other volume published in America during the World War—outside of the *Army Drill Regulation*, than which it was generally regarded as funnier.

A History of Transportation

The Romance of American Transportation, by Franklin M. Reck (editor of *The American Boy*); 253 large pages, illustrated with 146 photos, old prints, maps and diagrams; Thomas Y. Crowell Co., N. Y. City; $2.50.

IF we were called upon to suggest a book covering the whole subject of transportation in this country, suitable for a lad in his early 'teens, we could think of nothing better than *The Romance of American Transportation*. This work is packed with historical facts about the development of the railroad and its rivals: the stagecoach, the canal, the steamboat, the automobile (including the bus and truck) and finally the airplane.

Although the illustrations are plentiful and well chosen, the extreme brevity of their captions seems to indicate a lack of creative imag-



The transportation situation in America and recommendations for its improvement are discussed in this booklet.

A copy will be mailed free upon request.

Association of American Railroads
926 Transportation Building
Washington, D. C.

ination. Either that, or else the caption writer too obviously "wrote down" to boys. The average keen-minded youngster of our acquaintance wants to be told more about a picture than that it shows "Building the Railway Across the Great Plains" or, perhaps, "A Freight Locomotive of 1877." The latter happens to be the Santa Fe's famous *Uncle Dick*. She had a fascinating history, although you'd never guess it from anything Mr. Reck tells you.

Modern Railroading

Railways Today, by J. W. Williamson (author of *A British Railway Behind the Scenes*); 160 pages, 55 photos, numerous line drawings; Oxford University Press, London, N. Y. City and Toronto; $1.50. (Ninth volume in a series: *The Pageant of Progress.*)

UNLIKE most books of its type, *Railways Today*, as the title implies, devotes very little space to past history. It is pre-eminently a volume for those who are seriously interested in *modern* railroading and have a lively curiosity to take the subject apart and find out what makes it tick. Even the well-informed fan will discover in this book much interesting information that is new to him. And the reader who possesses only a smattering knowledge of rail problems will be amazed, for instance, at the complexity of diagrams used in making up an ordinary timetable. A study of these diagrams, as included in Mr. Williamson's book, is a liberal education.

The author gives us much more than a casual bird's-eye view of the whole field; and then, at the end, like Alexander sighing for new worlds to conquer, regrets that he could not have told more. The only "catch" in *Railways Today*, so far as North Americans are concerned, is that it deals largely with British practice.

The Illinois Central

Organization and Traffic of the Illinois Central System, compiled and edited by the Research and Development Bureau of the Illinois Central Railroad Co.; 526 pages; 64 statistical tables, several charts, diagrams, maps and photos; $1 to IC employes, $3 to the public. General offices: Central Station, Chicago, Ill.

NOT less than fifty officers of the Illinois Central have written the fifty-nine chapters of this comprehensive work, each chapter covering authoritatively and in detail a phase of the IC's many activities. It goes without saying that every IC man should not only acquire this book but should read and re-read it, familiarizing himself with his own company, what it is doing and how it operates. Indeed, nearly 2000 copies were sold before it came off the press—sold, we surmise, to shrewd employes who believe that a knowledge of their road might eventually prove a stepping stone to advancement; provided, of course, the knowledge is put to practical use, such as freight solicitation, etc.

The book also has value for railfans, students of economics, and transportation men in general. We wish that this cross-section of a great American institution had been written more entertainingly instead of, for the most part, like official reports. But maybe that would be asking too much.

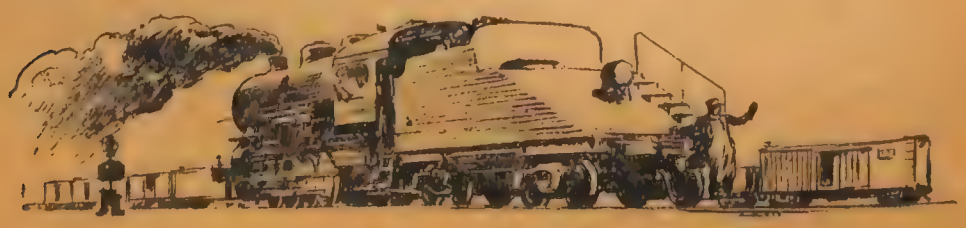


Photo by Charles Schrade, 20 Chatfield St., Springfield, Conn

A Steam Locomotive, No. 1338, Comes to the Rescue to Keep a Juice Line Running. This Unusual Shot Was Made on the New Haven Railroad Shortly after the Hurricane Last Fall, when a Pacific Type Was Called upon to Pull a "Dead" Electric Engine and Its Passenger Train Out of Stamford, Conn.

Railroad Camera Club

AN inter-club print competition is sponsored by the Manhattan Camera Club. April's subject will be "Smoke"—which steam-locomotive photographers are quite capable of handling. Several prizes are offered. For details write to the Manhattan Camera Club, 310 Riverside Drive, New York City.

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RAIL-PHOTOS, an engine-picture concern located at Merchantville, N. J., has not answered recent correspondence. We cannot say whether or not they are still in business.

* * *

JAMES ADAMS, 948 San Pablo Ave., Albany, Calif., will sell or trade size 620-116 pix of SP, UP, Santa Fe; also train orders & employees' timetables; write first.

W. G. ADDISON, 2123 McDowell St., Augusta, Ga., has latest 84 issues of *The Locomotive Magazine* (England), value $25, for best cash offer.

BOB ARCHER, 151 S. Fuller Ave., Los Angeles, Calif., collects trolley tokens and transfers. Offers items of LARy.

BILL BARR, Jr. (age 12), 2506 Foothill Blvd., La Crescenta, Calif., is starting pix collection and would appreciate help from other fans.

EDWIN BATTISON, 1 Central St., Windsor, Va., has *Field Book for RR Engineers* by J. B. Hinck, *RR Curves & Earthwork* by C. F. Allen, *Economics of RR Construction* by W. L. Webb, to sell or trade for best offer. Wants loco clock and photos of Vt. and N. H. power.

ELDON BEHR, 2633 29 Ave S., Minneapolis, Minn., wants Oct. '32 *Railroad Stories*, and photos of locos and

READERS who collect, buy, sell, exchange, or make pictures of locomotives, trains, cars, etc., are listed here as members of the Railroad Camera Club. This Club also includes other railroad hobbies such as collecting railroad books, tickets, timetables, train orders, trolley transfers, etc.

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Address Railroad Magazine, 280 Broadway, New York City. Tell us what you want or offer. Unless you do so, your name will not be printed here.

Photos by Charles F. Munyer, Jr., 57 Pacific St., New London, Conn.

Boats Invaded the NYNH&H Railroad Tracks during the Big Storm Last Autumn. Upper Photo Shows Engine No. 1399 Passing the Lighthouse Tender "Tulip." Below We See Passenger Train No. 14, Unreported for 24 Hours, with the Good Ship "Ruth" Apparently Attached to Her Rear End as a Sort of Observation Car

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From Collection of Robert W. Shisler, 15 Hall St., Tiffin, O.

"In the Good Old Summer Time" on the Tiffin, Fostoria & Eastern Electric Ry.—A Rare Photo Made 40 Years Ago by Stephen Showers. The TF&E Began Operation with Horse-Cars in 1888; Trolleys Were Introduced in 1892; and Finally, in 1931 or 1932, the Whole Line Was Abandoned

trains that have appeared on U. S. and foreign postage stamps. Will buy, or has *Loco Engineers Journal* '35-'38 in trade.

WM. BENNETT, R. R. 8, Box 508a, Dayton, O., has 116 size engines of eastern and western roads to trade; send your list & samples for same.

MARIO BERRY, 5 Chemin de Montauban, Lyon V, Frances, announces that the A.F.A.C. (French rail-fans) can no longer send out free copies of *Chemins De Fer*. It seems that they were swamped with requests.

B. E. BISHOP, 856 Main St., Santa Clara, Calif., has emp. timetables, train orders and mags. to exchange or sell. Wants tables of FW&DC, PE and western short lines.

BYRON BOCK, 2332 Bloomingdale Ave., Chicago, has many pix of interurban, elevated and trolley cars to sell or swap; will send list. Wants photos of Piedmont & Northern, and Iowa interurbans.

FRANK BRADFORD, 6821 11th Ave., Los Angeles, Calif., has many PE, LARy, SD Elec., SP, UP and Santa Fe, 6 for 25c, or will trade for interurbans, past or present; list & 2 samples, 10c.

J. W. BRAUNER, 17 E. Spring St., Williamsville, N. Y., wants 616 and 620 pix LV camelbacks and 4-wheel cabooses. Will trade same size locos & cahooses of roads entering Buffalo; also small W. N. Y. lines.

ARTHUR BRINCKERHOFF, 2545 N. E. 49th Ave., Portland, Ore., wants to trade, buy or sell public & employees' tables of steam & electric lines, blue-print schedules of city lines, and photos & transfers of Portland Traction Co. Send lists first.

R. R. BROSS, 2554 Upham St., Madison, Wis., wants copy of Jan. '37 *Railroad Magazine;* also IC engine photos, wreck pix, & operating tables of all divs. Write first.

FREDERICK BROWNELL, 2970 Sheridan Ry., Chicago, wants rosters of roads terminating in Chicago.

D. S. BRYANT, 35 Taranaki St., Wellington St., New Zealand, will buy 120 size negs. of all streamliners, and Mexican and Central American roads.

STEPHEN BUBLINEC, 637 E. 5th St., N. Y. City, has 116 size negs., 3 for 25c, or 10c coin for sample. Will trade 1 neg. for 5 prints of same size; no list.

RUSSELL BUCKHOUT, 11 Midland Ave., Glen Ridge, N. J., offers gold-plated loco charm of 999 type, 1½ in. long, with ring attachment; clear detail on both sides; $1.

BENJAMIN BURKHOLDER, 7 Central Ave., Primos, Pa., wants negs. SP and UP locos; state size & price.

PAT CARUSO, 731 Garfield Ave., Jersey City, N. J., offers following books for best offer in engine pix or cash: *Science of Rys.* Vol. 12, *Enginemen's Manual*, Westinghouse instruction book and 3 pamphlets, LV 1911 Rulebook, and *Air Brakes* and *Modern Locos* by Thos. A. Annis; write first.

MURDO CHRISTIE, 3 Lowe Block, Edmonton, Alta., Canada, has photos CNR, NAR, CPR and others for sale; 10c for list & sample.

ROBERT CROCKETT, 1224 N St. N.W., Washington, D. C., wants 116 negs. of BCER, FJ&G, PE and Texas Electric.

EDWARD CURLEY, 224 Fernwood Ave., Rochester, N. Y., has following copies *Railroad Magazine* for sale: Dec. 21, 1918; Sept. '30; Sept. & Dec. '32; all '33 (except Apr.); all '34; all '35 (except Dec.); all '36 (exc. Aug.); Jan., Feb., June, July '37; Oct. '38; also Dec. '34 *Loco Engineers Journal*, May '33 *Erie Mag.*

LESLIE CURTISS, 1833 Shelby St., Seattle, Wash., will pay good price or trade for side view of C&O No. 3035.

* * *

WALTER DEAN, 827 N. Mozart St., Chicago, starting; invites correspondence and advice about rail pix.

FRANK DeLARM, 25 Longmont St., Providence, R. I., will give Jan. & Oct. '38 *Official Guides* to worthy person who will send postage; write first.

A. DELUCIA, R. F. D. 1, Herkimer, N. Y., has rulebooks, train orders and photos to trade.

RALPH DERBY, Brunswick, Me., offers section of rail from aband. Bridgton & Saco River, with 2 photos of engines & historical sketch, 60c postpaid.

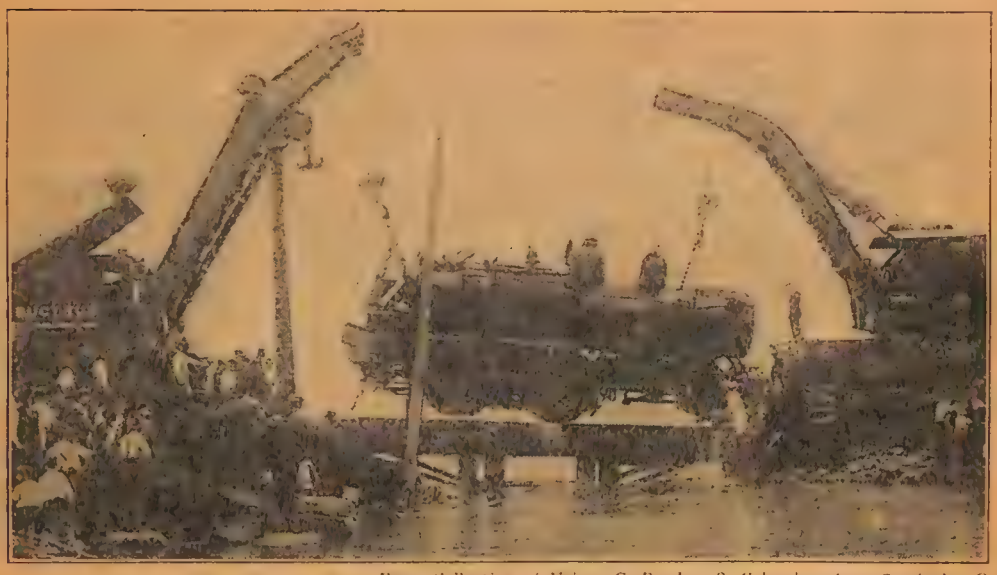
JOHN DOCKENDORF, 357 Knickerbocker Ave., Brooklyn, N. Y., offers postcard photos of B&O, CNJ, Rdg and other locos in trade for NYC Hudson types; send list first.

EDWARD DORSEY, Apartment R-1, Raleigh Apts., Raleigh, N. C., has 3x4 and 616 photos of SAL, NS, and a few southern lines to trade for same size Clinchfield, Southern, NC narrow-gage, SAL, ACL and NS.

C. F. DRAKE, 3210 Victor Place, Wichita, Kans., wants to exchange trolley tokens; send one of yours for Wichita token. Will buy MoP pub. tables before 1928 and emp. issues Omaha & N. Kans. Div. any date.

KEG. DUCKWORTH, 359 E. Cambourne Ave., Ferndale, Mich., starting collection of 120 or 116 prints of NYC and CPR locos.

RALPH DUNN, 1613 Fairmount Ave., Philadelphia, Pa., wants to hear from correspondents in Parkersburg,



From Collection of Nelson G. Burden, S. Columbus Ave., Sandusky, O.

From Collection of Kenneth H. Cooke, 3407 Clifton Ave., Cincinnati, O.

No, You're Not Seeing Double. These Were Two Different Wrecks, Both in Ohio. We Have No Data on the Lower Picture, Except That a Pennsy Engine Was Fished from the River at W. Liberty, in August, 1913, after Being Immersed for Five Months. The Other Accident Was a Drawbridge Collapse at Sandusky in June, 1909, on a Spur Track Used Jointly by the Lake Shore, the Nickel Plate and the Lake Erie & Western. Nobody Was Hurt

W. Va., in Cincinnati, and in Du Bois, Pa., who will trade negs. of B&O power.

WILLIAM ELMER, 12 Cross St., Saco, Me., wishes to dispose of entire lot of '37 and '38 *Railroad Magazine*.

PAUL ESLER, R.F.D. 1, Royersford, Pa., wants 116 or 616 size Cornwall RR, Steelton & Highspire, Tronton, O&B, PB&NE, Chestnut Ridge; and Rdg. 163, 269, 280, 287, 541, 975.

T. HARRY FISHER, 88 King W., North Bay, Ont., Canada, will give 1 pix of CPR or T&NO old-timer for

each 20 King George VI stamps of British island colonies sent him

WM. FLACK, 324 N. 25th Ave., Yakima, Wash., has 116 size NP prints for sale or trade for other NP; list & sample, nickel & stamp. Wants negs. of Nos. 2246, 2253, 2257, 2262, 2263, 2265 and Q5 and W3 engines. NP roster, 25c.

JOHN FLETCHER-LYON, 24 Gibsongray St., Falkirk, Scotland.

W. F. FOSTER, 209 S. 4th St., Richmond, Va., has few $100 Confederate notes showing loco & train (issued 1862)—some in good shape $1, others worn but legible, 50c. Also 8x10 photos of 3-way crossing, $1, or 5x7 size, 75c—no stamps.

PAYSON FRANCIS, 15 Goodnough Rd., Chestnut Hill, Mass., wishes to obtain couple of old rail lanterns of bracket type, suitable for use in a den.

HAROLD FREDERICKS, Oak Ridge, N. J., buys pix of any NYS&W and old L&HR engines.

JOHN FURDON, c/o R. D. Gray, Cold Brook, N. Y., wants to buy old pix of NY&NE when old White train used to run.

* * *

WILLIAM GALLAGHER, 2130 29th St., Ashland, Ky., has written 17-verse poem on wreck of the 2313 at Ashland in 1935; also 2 poems, *The Pay Car* and *I'm a Railroad Fan*—3 poems and pix of 2313, 25c cash, plus free timetables and train orders while they last.

W. E. GLOEB, 4314 Center St., Omaha, Neb., has few *Seniority Guides* (1938), a directory with names & addresses of railroad men running in and out of Omaha on UP, CB&Q, M&O and C&NW (over 1500 names), and UP train orders to trade for back numbers *Railroad Stories*, and pix old engines and trains.

ROBERT GRANT, 3327 Hogarth Ave., Detroit, Mich., starting collection of interurban pix; has E&IR trolley receipts to trade.

* * *

I. L. HAYSER, c/o Timms & Howard, Inc., 116 E. Washington St., Syracuse, N. Y., has many CGW, NP, KCS engine pix: sizes 2x6, 116, p.c., 3x5, 8x10, etc., at 10c-35c ea.

P. R. HEMPHILL, Jr., 204 N. Locust St., Hagerstown, Md., wants pix of circuses and carnivals; offers cameras, rail stamps, etc., in trade. Also needs Feb. & Sept. '30, July '34 and June '35 *Railroad Stories*: first write.

BILL HENSLEY, 11840 S. Vencennes, Chicago, specializes in Rock Island, C&NW and Grand Trunk action shots; wants to hear from other members interested in action shots.

H. HINRICHS, 3101 Hawthorne Blvd., St. Louis, Mo., buys 5x7 prints, 3 for 25c; 6x10, 3 for 50c; also good negs. Esp. interested in all engines & old pass. cars of western and Mexican roads.

JOSIAH HOBART, 511 13th St., Pacific Grove, Calif., wants lists of small roads in Idaho, abandoned or running. Has many 120 size prints to trade or sell.

JAS. HOWARTH, Slingerlands, N. Y., wants pix of Nev. Central, D&RGW and D&I Elec. n-gages. In exchange will give NYC emp. tables, rule book. Has *Pocketlist of RR Officials*, 60c.

ROSCOE HUKILL, 1484 W. Broad St., Columbus, O., has 14 issues camera mags. and candid cameras & film to trade for back issues *Railroad Magazine*; state dates and make offer.

SAM HYMAN, 135 W. 79th St., N. Y. City, wants to buy or trade emp. tables from eastern roads. Also trades few govt. topographic maps of rail lines.

* * *

DONALD IDARIUS, 17 N. Parkside Ave., Chicago, wants to hear from persons in mid-west towns which have trolley or interurban shops located therein. Also trades trolley prints.

A. E. JAY, 630 Park Rd. S., Oshawa, Ont., Canada, beginner; wants lists & samples.

PAUL JOHNSON, R. 3, Box 220, Mt. Vernon, Wash., offers April '36 and Jan., Feb., June & July '37 *Railroad Stories* at 15c ea. postpaid.

GEORGE JOLLEY, 6040 Blackstone Ave., Chicago, will trade baggage stickers from Soviet Russia and a rulebook of Northwestern RR when under govt. supervision in 1919.

E. D. JONES, 864 Second Ave., Verdun, Que., Canada, will sell 7 size 116 loco photos for 25c; list sent on request.

J. E. JONES, 2104 11th St., Wyandotte, Mich., offers 30 dif. 3x5 photos of old time locos dating back to 1869: *Puffing Billy*, Stephenson's *Rocket*, etc., 10c ea., or trade for 5x7 or larger. Also 17 4x10 negs., 50c ea. List for 3c stamp.

* * *

DAN KELLEHER, 1758 Griffith Park Blvd., Los Angeles, Calif., wants old *Railroad Man's* before 1930; also SP transportation rulebook; state prices first.

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KAY KENNEDY, Anchorage, Alaska, can furnish p.c. size photos Alaska RR locos, $1 a set, and train orders at $1 each.

R. H. KENNEDY, 1317 Winnemac Ave., Chicago, wants 116 size negs. of eastern and southern roads; will trade 6 prints for every neg. accepted.

ALBERT KING, 1031 Ave E. North, Saskatoon, Sask., Canada, has 616 and 127 size CNR prints to sell or trade. Wants 616 or 116 CNR prints and 127 size locos any road.

THOMAS KING, Box 7, Deer Lodge, Mont., makes billfolds, silk-lined and tooled by hand, with a design (not larger than 3x3) of RR fraternal, lodge or club emblem or pix of streamliner, at $2.50-$3.

FRANK KOETZ, 1101 E. 24 St., Minneapolis, Minn., wishes to trade trolley transfers.

BASIL KOOB, Hillsboro, Wis., wants photos of abandoned stations, right-of-ways, n.-gage power and eqpt., and also small power now in service. Will buy box relay and key.

* * *

STEPHEN MAGUIRE, 304 2nd Ave., Bradley Beach, N. J., wants negs. and other material of N.Y. State Rys. lines. Has trolley & interurban photos & negs. for sale or trade.

MANIFEST MAGAZINE has become *The Northwestern Manifest*, a C&NW-CStPM&O fan publication covering corporate history, loco data, eqpt., changes & purchases, etc. Subscription, 50c a year. Write A. E. Miller, 3448 33rd Ave. S., Minneapolis, Minn.

JOHN MANN, 210 E. 8th St., Rolla, Mo., will buy *Loco Cyclopedia* before 1938; also Frisco loco prints & negs. First write.

GEO. McGUIRE, Jr., 808 E. Grand, Springfield, Mo., will buy, or swap Frisco prints for, streamliners of all roads.

IVAN MILLER, R. 1, Bolivar, Pa., wants photos of Rdg. camelbacks on Atlantic City Div.

WARREN MILLER, 1776 Greenwich St., San Francisco, Calif., sells 116 size prints of 60 Calif. and Nev. roads; list & sample, 5c. Buys & trades negs. of pikes west of Denver. Juice fans in Wash., Ore., Utah, Colo. and Ariz., please write.

CHARLES MIZELL, Jr., P. O. Box 365, Denton, Tex., has many M-K-T, T&P, Santa Fe, T&NO and also *Zephyr* prints to trade.

FRANK MURNANE, 140 Congress St., Cohoes, N. Y., has negs. & prints of D&H, NYC, B&M, etc., to sell or trade; send your list & sample for his. Wants *Railroad Stories*, 1932-35; write first.

* * *

RAYMOND NEVEIL, Jr., 182 Summit Ave., Bloomfield, N. J., will sell or trade size 116 engine pix of Erie, CNJ, LV, etc., for other roads. Sends his list & sample for 3c stamp, or for your list.

R. T. NEWMAN, 701 N. Main St., Paris, Ill., has over 500 mags. of S. African Rys., Indian State Rys., N. Z. Rys., Canadian roads and several U. S. lines for sale or trade: send for list.

* * *

JOHN O'LEARY, 2563 Emerald Ave., Chicago, will buy railroad booster stickers and 1939 calendars any road; write first.

LEO ORSBERN, 2403 E. Grand Ave., Des Moines, Iowa, is selling out many 122 and 116 size negs. of Rock Island and electric lines running into Des Moines at 15c ea. Also has new pix list & sample prints for 10c.

* * *

JOHN PATISNOCK, Box 302, Clarence, Pa., wants pix of NYC and PRR engines around 1900.

LEO PETKUS, 926 W. 52nd St., Chicago, wants passenger prints of M-K-T and KCS; write first.

PETE POHONEY, 7068 Hugo Ave., Ville St Michel, Que., Canada, wants negs. of any roads in Canada or States; send samples if possible.

R. E. PRINCE, Jr., 1141 Larchmont Crescent, Norfolk, Va., has p.c. and 116 size prints for sale of AB&C, Gainesville-Midland, NS, etc. List & set of samples, 25c.

* * *

LINDSAY ROBERTSON, 19 Railway Parade Eastwood, N.S.W., Australia, will trade engine photos for postage stamps and newspapers.

ED. RADCLIFFE, 8706 Osler St., Vancouver, B. C., Canada, has 616 CNR, GN, CPR, BCE, NHB, PCT, PGE and geared types to trade for same or any small Canadian roads; also sells prints 3 for 10c, negs. 2 for 15c—plus postage.

E. J. RATZ, 2819 Shenandoah Ave., St. Louis, Mo., offers trolley & interurban photos, 5c ea., 50c doz., or trades 4 prints for 1 neg.; send dime for list & 2 samples. Wants caboose negs. S. American collectors, write.

G. RICHARDSON, 74 Harrison Place, Irvington, N. J., will trade either old or recent copy of *Official Guide* for 25 snaps of locos and right-of-way views.

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(pref. western roads) with fans in N. Y. area (postage prepaid).

MYRTLE ROONEY, Mt. Denson, N. S., Canada, will trade CPR, CNR, and Dominion Atlantic train orders for any U. S. & foreign orders.

HERBERT ROSENFELD, 2054 Harrison Ave., Bronx, N. Y. City, wants 116 size negs. of U. S. trolleys, interurbans, locos, pass. & freight cars. Has trolley pix to sell, 3c ea.; send 5c for list & sample.

C. A. ROWE, 218 W.Terrace St., E. Syracuse, N. Y., has 116 size NYC, DL&W locos and shops & yards, also views of 17-in. gage amusement road, at 8c each or trade; send 3c stamp for list & sample. Also offers *Railroad Magazine* for Nov. '36, Dec. '37 and Feb.-Dec. '38.

IVAN SAUNDERS, 142 S. St. Clair St., Pittsburgh, Pa., has 450 B&O negs. to trade for other B&O negs. only, incl. BR&P, B&S, CH&D, CI&W, C&C, M&K, etc. Send 10c for list & sample print.

CHILTON SCHEEL, 324 Dwasline Rd., Passaic, N. J., can now offer 116 size as well as 120 size pix and negs. for trade or sale.

JACK SCHMITT, Jr., 265 Sherman St., Buffalo, N. Y., would like to buy or trade back issues *Railroad Magazine*.

EMIL SCHWENK, 74 Milford St., Duquesne, Pa., offers picture developers (photo-printer) to use with your own negs. for 59c, plus postage. Suitable for cards, stationery, etc.

EUGENE SHAPAN, 3603 Quentin Road, Brooklyn, N. Y., wants copy of Aug. '33 *Railroad Stories*.

FRANK SMARS, Ziegler, Ill., is disposing of part of his collection of stickers, stationery, maps, scenic postcards and *Illinois Central Mags.*, *Loco Engineers Journals* and *RR Trainman*; also following books: *Trains of Today-Tomorrow*, *UP Trail*, *The Orient Express* and '36 edition *Statistics of Rys. in U. S.*

WALTER SMITH, 654 Franklin Ave., Nutley, N. J., wants Aug. & Nov. '33 and March, July, Oct., Nov. '34 *Railroad Stories*; first write.

GORDON SOLLE, Omena, Mich., starting; send your lists. Will trade pix for printing.

HENRY SOODSMA, 141 Irving St., Midland Park, N. J., starting; wants lists & sample. Has few Erie prints for sale or trade.

R. J. STEUER, 1612 N. 49 St., Milwaukee, Wis., has many shots of streamlined eqpt. of Santa Fe, Burlington, Milw. Rd., NYC, UP, etc., to trade for pix of *Rebel*, *Comet*, SAL diesel-elec. and other streamliners.

E. E. STROCK, 590 State St., Conneaut, O., has original wreck photo from which drawing on p. 66 of this issue was made: 3x7 size, 25c ea.; 6½x8½, 35c.

WILLIAM TENNIS, Jr., 1195 Exposition Blvd., Los Angeles, Calif., will pay reasonable price for pix of Tom Thumb railroads in Eastlake Park and in Venice, Calif. (OP&PdR); write first.

F. N. TITUS, Horseheads, N. Y., has 16 mm. motion picture film to sell or rent of Erie Limited and No. 1,

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29x4.75-20	20	2.50	1.25
29x5.00-19	19	2.85	1.25
30x5.00-20	20	2.85	1.25
5.25-17		2.90	1.35
28x5.25-18	18	2.90	1.35
29x5.25-19	19	2.95	1.35
30x5.25-20	20	2.95	1.35
31x5.25-21	21	3.25	1.35
5.50-17		3.35	1.40
28x5.50-18	18	3.35	1.40
29x5.50-19	19	3.35	1.40
6.00-17		3.40	1.40
30x6.00-18	18	3.40	1.40
31x6.00-19	19	3.40	1.45
32x6.00-20	20	3.45	1.50
33x6.00-21	21	3.65	1.55
32x6.50-20	20	3.75	1.75
6.00-16		3.75	1.40

REGULAR CORD TIRES

Size	Tires	Tubes
30x3½	$2.35	$0.95
31x4	2.95	1.25
32x4	2.95	1.25
33x4	2.95	1.25
34x4	3.25	1.35
32x4½	3.35	1.40
33x4½	$3.45	$1.45
34x4½	3.45	1.45
30x5	3.65	1.65
32x5	3.75	1.75
33x5	3.95	1.75

HEAVY DUTY TRUCK TIRES
(High Pressure)

Size	Tires	Tubes
30x5	$4.25	$1.95
31x5	4.35	1.95
34x5	4.25	2.25
32x6	7.95	2.95
30x6	9.95	4.45
34x7	$10.95	$4.65
38x7	10.95	4.65
36x8	11.45	4.95
40x8	13.25	4.95

TRUCK BALLOON TIRES

Size	Tires	Tubes
9.00-20	$3.75	$1.85
10-20	4.45	1.95
7.00-20	5.95	2.95
8.25-20	8.95	4.95
9.00-20	10.95	5.65
9.75-20	13.95	6.45

ALL OTHER SIZES

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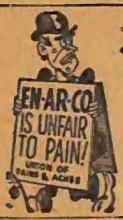

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WALTER VAN DYCK, General Delivery, Wadesboro, La., starting collection of engine pix and rail scenes—esp. narrow-gage, short and abandoned lines.

LEWIS WALTER, 34 Highview St., Norwood, Mass., has 116 size photos of New England and other roads, also 5x7 and 8x10 enlargements for sale or trade; send stamp for list. Trades New Haven emp. timetables.

FERDINAND WENGRZYN, 1435 Washington St., Lincoln, Neb., wants lists from fans having 116 size negs. or prints to sell or trade.

CHARLES WESTFALL, 115 W. Locust St., Des Moines, Iowa, will pay 50c ea. for April '30 and July '31 *Railroad Stories*; write first.

F. E. WHEDBEE, Seabrook, Md., has following rail material for best offer: leather-bound scrapbook with about 500 rail pix; 5 late issues *PRR Employees Journal*; June-Dec. *Loco Engineers Journal*; and 8 books on air brakes and locos.

EDWIN WILSON, 3028 N. Bartlett Ave., Milwaukee, Wis., has C&NW, Soo, CB&Q, Rdg, NYC, Erie, GB&W, Milw. Rd, CNJ, [illegible] &NE, IC, Santa Fe, Frisco, IHB and other prints—6x8 size, 5c ea., 6 for 25c, 122 size, 7c ea., 4 for 25c—plus postage; write.

FRANCIS WOLFORD, Bevier, Mo., will pay 20c for Feb. '37 *Railroad Stories*; write first.

H. WOLTERS, 128 Chestnut St., E. Orange, N. J., has 116 size N&W, CNR, CPR, GN, SP, UP, CNJ, DL&W and others, 10 for 45c, 15 for 60c. Also '32, '34 and '36 *Official Guides* at 75c ea; Jan., Feb., June, July '37 and Oct. '38 *Railroad Magazine*, 25c ea. Foreign members near rail-ship terminals, write.

GEORGE YATER, 337 Kenwood Way, Louisville, Ky., wants photos of old L&N, LStL&T (now LH&StL) and Daisy trains which ran from Louisville to New Albany and Jeffersonville; also old Louisville Ry. Co. or Interstate cars used on Indianapolis-Louisville run. Southern railfans, please write.

Next Month:

Narrow-gage fans will enjoy the biography of Lewis R. Lathrop, recently retired veteran engineer of the Denver & Rio Grande Western. This long true tale starts in the May issue of Railroad Magazine, out April 1. Brother Lathrop knows his beloved D&RGW, its men, its motive power, and its early history—history which he himself has lived through. Having a vivid memory, he gives us a lot of hitherto unpublished material, well illustrated.

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ATCH YOUR NERVES — LET UP—LIGHT UP A CAMEL

BAREBACK RIDING TITLES fall to rodeo star Carl Dossey (*left*) because of his splendid muscular control and the fact that he keeps his mind one jump ahead of the "bronc." But that means plenty of good old-fashioned nerve strain for Carl. "It's tough, exciting work," says he, "that would soon get my nerves jittery if I didn't ease off regularly. It's a rule with me to let up—light up a Camel every time I get a chance. Camels are mighty comforting. Most cow-punchers I know go for Camels."

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"AT TWO MILES A MINUTE on a dirt track anything can happen!" says Ernest Gesell, Jr. (*right*), who won a National Circuit Championship in midget auto-racing. "Skids, crashes put a big strain on my nerves." Naturally, Ernie values steady nerves. And it's a rule with him to give his nerves frequent rests—to let up—light up a Camel.

In hazardous jobs—
in every-day "grinds"
—smokers say
"CAMELS ARE SOOTHING TO THE NERVES"

JOAN NELLIGAN is a proof-reader. Like so many other people in every-day occupations, she doesn't live a hazardous life, but there's plenty of nerve strain in the kind of close work she does. She concentrates intensely to keep mistakes from getting into print. Her rule for resting her nerves is this: "When I feel 'nerve fag' coming on," she says, "I let up—light up a Camel. Camels soothe my nerves. I can smoke as many as I please. Camels are mild. They never tire my taste!"

TWO AND ONE-HALF MILLION miles of flying without an accident! Meet Captain "Jack" Knight, United Air Lines. "I make it a firm rule to keep my nerves from getting strained and jumpy," says Captain Knight. "Every opportunity, in the air or aground, I let up—light up a Camel. Camels are really soothing—a grand smoke!"

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